DOCUMENT RESUME

ED 366 781 CE 065 662

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TITLE Research and Evaluation Pilot Report 1992.

INSTITUTION Cornell Univ., Ithaca, N.Y. Dept. of Education.; State Univ. of New York, Cobleskill.

SPONS AGENCY New York State Education Dept., Albany.
PUB DATE 92
NOTE 77p.; Product of the Agri Tech Prep 2000 Consortium. For related documents, see CE 065 661-664. Appendix D contains small type.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Agricultural Education; Career Choice; Economic Status; Educational Attainment; Field Tests; Grade 10; High Schools; Pilot Projects; Questionnaires; School Attitudes; State Surveys; Statewide Planning; Student Attitudes; *Student Characteristics; *Student Educational Objectives; *Student Interests; Student Motivation; Work Experience
IDENTIFIERS *Agri Tech Prep 2000 Project; New York; *Tech Prep

ABSTRACT

A pilot study was conducted to field test instruments that could be used to assess, evaluate, and improve curricula to be used in the Agri Tech Prep 2000 (ATP 2000) project. The project features a 4-year tech prep program linking New York high school and postsecondary curricula to prepare students for careers in agriculture or acceptance into a college-level agriculture program. A survey instrument focusing on students' economic/family backgrounds, career interests, knowledge/perceptions of agriculture, educational background/interests, work experience, and personality traits was administered to 172 10th-grade students at 5 pilot schools associated with ATP 2000. The Strong Interest Inventory was administered to 108 students. The content validity of the researcher-developed instrument was confirmed, and its findings were summarized for use in future curriculum development. According to the survey instruments, most students did not perceive the integration of agriculture and academic courses, 30.9% planned to attend a four-year college, 19% planned to attend a two-year college for their terminal degree, and an additional 17% planned on attending a two-year college before transferring to a four-year institution. (Appendixes constituting over half this document contain the survey, survey administration instructions, selected findings, and the Strong Interest Inventory.) (MN)

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agri tech prep 2000

ED 366 781

RESEARCH AND EVALUATION PILOT REPORT 1992

Partial Fulfillment of Cornell Subcontract
NYS Project 137305
in Conjunction with
ATP 2000

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Preface

The pilot study summarized in this report was a joint effort of the ATP consortium members and cooperators. Many individuals contributed to the success of this phase of the project. Members of the Cornell subcontract staff include Mhora Newsom–Stewart who assisted with instrument development, data analysis and the writing of this report.

Table of Contents

Preface i

Introduction 1

Purpose of Study 2

Procedures
- Population and Sample 2
- Instrument Development 3
- Content Validity 4
- Reliability 4
- Analysis of Data 5
- Computer Programs 6

Findings
- Family 7
- Household 8
- Economic Background 9
- Student Mobility 10
- Agricultural Information 10
- Personal Traits 11
- Social/Economic Priorities 12
- Work Experience 13
- Career Interests 14
- Educational Background and Interests 17
- Strong Interest Inventory 24

Conclusions 27

Appendices

Survey Administration Instructions ..... A

Survey ..... B

Selected Findings C

Strong Interest Inventory ..... D

INTRODUCTION

What individuals learn in any academic setting is a direct result of both what is being taught and the complex social context in which learning takes place. Human development occurs in this complex environment and is shaped by the individual's perceptions of that environment. The environment consists of an individual's family and school and the surrounding society. Perceptions, in turn, are shaped by present and past experiences.

Experience leads each person to perceive events differently according to the paradigm he or she uses and the context within which he or she is placed. Knowledge, then, is anchored in experience. This research focuses on the perceptions that students hold about social, economic and educational issues which are relevant to ATP 2000.

Tech Prep was implemented through federal legislation in 1990. It's purpose is to act as a vehicle for educational reform through the integration of academic and technical curriculum. Agri-Tech Prep 2000 program was developed in support of national goals.

Agri-Tech Prep is a four-year program to provide technical preparation for secondary and post-secondary education and careers in agriculture. It's primary purpose is to link the high school and post-secondary curriculum. This will enable students to graduate from high school ready for a career in agriculture or acceptance into a college program in agriculture.

Cornell subcontracted from SUNY Cobleskill, the primary contractor, to develop an evaluation system for the ATP 2000 project. An instrument was designed to obtain information on the family and school environment of students as well as their perceptions of social, economic and educational issues. The questionnaire will be used in formative and summative evaluations.

The instrument was pretested during the summer of 1992. This report summarizes the instrument development process and the results of the pretest.

PURPOSE OF THE STUDY

This project was a pilot study. The purpose was to field test instruments that could be used for assessment, evaluation and exploratory research that could improve an ATP curriculum.

PROCEDURES

During Spring 1992 an instrument was developed and administered in five pilot schools associated with ATP 2000. Prior to field testing, the instrument was reviewed by a panel of experts for content validity. It was then field tested to establish instrument reliability. Teachers at each of the five schools were given specific instructions on how to administer the survey to the tenth grade class (See Appendix A). The completed instruments were mailed by the pilot school coordinators to Cornell for analysis.

In addition, a nationally normed instrument, the Strong Interest Inventory was administered to a sample of students in the five pilot schools. The Strong Interest Inventory is a survey instrument used to compare the interests of an individual with the interests of people happily employed in various occupations. It should be stressed that the Strong is a measure of interests, not of intelligence or ability. This instrument is widely used in career and educational counseling by schools, universities and private industry.

Population and Sample

Tenth grade students in the five schools were the target population for both instruments. One hundred and seventy two (172) students completed the researcher-developed survey during the first part of June 1992. Additionally, one hundred and eight (108) students completed the Strong Interest Inventory. The distribution of respondents for each instrument among the five schools is shown in Table 1. Because this was a field test, there was no attempt to follow-up non-respondents. The number of students who responded was beyond that needed to establish reliability and to determine the appropriateness of the instrument for the population.

Table 1

School	Number of Students	
	Researcher Developed Instrument	Strong
St. Johnsville	20	14
Friendship	15	9
John Bowne	65	34
Tri-Valley	7	18
Lowville	64	33
Total Students	172	108

Instrument Development

The researcher developed instrument focused on perceptions and experiences of tenth graders. Questions concerned students' economic and family background, career interests, knowledge and perceptions of agriculture, educational background and interests, work experience and personality traits such as motivation and self-perception. This descriptive information will be useful in curricular planning and program evaluation.

To develop the questionnaire the researcher reviewed related literature. Related national and regional surveys were reviewed in depth. Included in these surveys were "High School and Beyond" and the "National Educational Longitudinal Study of 1988." Selected questions were taken from these instruments so that results from ATP 2000 would have a national base for comparison purposes. In addition, the list of agriculturally related jobs from the Strong Interest Inventory was expanded to be more representative of the broad industry of agriculture.

The questionnaire included a variety of question types, ranging from open-ended to rating scales. See appendix B for the questionnaire. To interpret a rating scale of 1-5, ratings of either 1 or 2 were considered low and 4 or 5 as high.

The standardized Strong Interest Inventory was administered as written.

Content Validity

A panel of experts determined that the researcher developed instrument was content valid through an independent review process.

The Strong Interest Inventory is content valid.

Reliability

A Cronbach's Alpha coefficient was determined for subscales on the instrument that included interval level data. The coefficients are as follows:

Table 2

RELIABILITY COEFFICIENTS
PILOT STUDY
SPRING 92

CATEGORY TITLE	COEFFICIENT
Perceptions of relatedness of work experience to academic subjects	.28
Work experience interest	.45
Academic and career reasons for taking elective courses	.68
Perceptions of relationship of agricultural terminology to agriculture	.98
Descriptors of Agriculture	.78
Descriptors of Environmental Science	.81
Perceptions of agriculture job availability	.90
Perceptions of agriculture jobs salary level	.88
Perceptions of relationship of agriculture to other academic courses	.75
Interest in high school agriculture related courses	.97

Interest in college agriculture related courses	.98
Perceptions of agriculture career satisfaction	.96
Association with significant others	.78
Influence of significant others	.91
Self perceptions of English ability	.89
Parental supervision	.80
Use of time out of school	.77
Perception of best friend	.52
Student's perception of how they are viewed by peers	.60
Social/Economic priorities	.89

For subscales below .70, questions were modified to achieve a higher reliability coefficient. Most of the subscales were modified in some form during Summer 1992 to enhance their readibility and clarity. The revised instruments were forwarded to a consultant to format on opscan sheets. These instruments will be available for use in late Fall 1992.

Reliability for the Strong Campbell Interest Inventory was established for tenth grade students nationwide.

Analysis of Data

The Cornell Institute for Social Science Research provided consulting services and assisted in data analyses.

Although the administration of the survey in Spring 1992 was not random, the data were analyzed for exploratory purposes. Primarily descriptive statistics were used for the analyses.

Five volumes of descriptive statistics were generated to test computer programs and explore the types of analyses that would be possible. The volume titles are:

The Tenth Grade Home School Survey for Agri-Tech Prep 2000

* Data Documentation: Part 1
* Data Documentation: Parts 3, 4 and 5
* Crosstabs: Question 1 to 180 by Grade Average
* Crosstabs: Question 1 to 180 by Regent's Track
* Crosstabs: Question 1 to 180 by Race
* Data Dictionary:

Additionally, Part II of the survey consisted of open-ended questions. The results of this section were analyzed using qualitative methods.

The description of the findings in this field test provided useful experience to prepare for full implementation of the instrument in 1992-93. A brief synopsis was prepared based on the findings to illustrate the types of information that will be available to the pilot schools. See Appendix C for the synopsis.

The career interest survey was machine scored under contract. See Appendix D for a sample of the scored instrument.

Computer Programs

Computer programs were written to analyze the researcher developed questionnaire and to allow it to be ready for implementation Fall 1992. However, there will be some modification due to selected changes in the instrument.

FINDINGS

The findings are designed as a prototype and for exploratory purposes only. No claim of representation is made. In the full scale analyses, more descriptive and inferential statistical analysis is anticipated. However, the simple descriptive statistics and analyses in this section provide the necessary background to determine that the instrumentation will meet the needs of the project.

Researcher Developed Instrument

Family

Family type:

Forty-one percent of students lived in single-parent households. Of these, one fourth (24.4%) lived in families with no male guardian and 17% had no female guardian (V2). Additionally, a few students mentioned that they lived either alone (1%), with friends (5.8%) or with spouses and children (3.5%).

Parents' economic status:

A large number of students lived in households in which one or both parents was unemployed (37% of female guardians and 26.2% of male guardians).

Over half the students lived in houses owned by their parents.

Parent's educational level:

The educational level of students' parents was varied. Approximately 44% of the parents had less than a two year college education. However, approximately 10% of parents had either a master's degree or a PhD. A good proportion of the students felt that their parents wanted them to graduate from college.

Family, cultural and language background:

The multi-cultural nature of present-day society was evident in the sample.

Among the sample of schools in this survey, John Bowne students in New York City were the most culturally diverse. In subsequent reports, data from this school will be shown separately from the others which have a more homogeneous student population.

Thirty percent of students parents and twenty (20%) percent of the students were immigrants. In over twenty-five (25%) of the families English was not the native or most commonly spoken language.

5.9 % of the students rated themselves as not understanding spoken English. Similarly, 7.7% felt they could not speak English and 4.2 percent said they could not read English. 5.2% could not write English.

Parental supervision:

Parental supervision appeared to be weak. Only fifty nine percent (58.6%) of students felt that their mother kept close track of them and less than half (47.9%) felt that their father did. Similarly, only 52% felt that their parents generally knew where they were and what they were doing.

Student communication with parents:

Communication between students and parents was also low. Over seventeen (17%) percent of students never spoke with their parents and over 80% of students spoke with parents less than six (6) hours per week.

Student communication with significant others regarding high school program:

Students do appear to talk with significant others regarding their high school program. Over 34% (34.1%) felt they spoke to their father or male guardian "a lot", while over half (52.8%) spoke to their mother or female guardian "a lot." Students also used other sources of counseling such as friends/relatives (44.8%), guidance counselor (40.2%), other adult friends/relatives (36.7%) and teachers (21.8%).

Household

Student educational orientation:

In order to be successful academically it is necessary that students have a place in which they can study. Almost half the students had no specific place to study in the family house (49.4%). However, two thirds of the students had a room of their own and almost 60 percent had some type of quiet place to study.

In addition to a place to study, students need resources and exposure to educational materials. Thirty (30%) percent of the households

received no daily newspaper. However, sixty percent (60%) received a regular magazine and 66% had an encyclopedia. Over one third of the households (36.3%) had a computer.

Student agricultural orientation:

Students' experiences provide a basis for course selection and learning once they have selected a course.

The majority of the students in this survey appeared to live in urban or suburban areas. Only twenty percent (20%) live in a household that has a barn, fifty percent (50%) have a garden. Sixty-five percent (65%) have some type of animal in the house and 71% have a lawn.

Economic Background

Salary ranges:

Students were asked what they considered a very low to a very high salary. Approximately half the students considered a high salary to be less than or equal to $30,000. Similarly, approximately a third indicated that an extremely high salary fell in this range.

Agricultural job availability:

Students perceived the number of agriculturally-related jobs highest in fisheries and wildlife (61.3%), followed by conservation (51.6%), hydrology and water quality (50.6%) and forestry (48.4%). The fields less frequently rated as having a high number of jobs were farming (23.7%), retail florist (28%), horticulture (29.1%) and gardening (32.3%).

Agricultural salary levels:

Considering the same agricultural job areas, students generally perceived the highest salary levels in landscaping (51.6%), environmental science (50.6%), hydrology and water quality (47.3%) and forestry (46.2%). The jobs least salaried in the views of students were retail florist (24.8%), farming and horticulture (30.1%) and plant breeding (30.2%).

Student Mobility

Students appeared to have expectations of finding a job or attending college close to home. Approximately 84% indicated plans to remain within 100 miles of their neighborhood after graduation. Even so, a majority (60%) of the students had previously traveled either out of the state or out of the country.

Agricultural Information

Career areas associated with agriculture:

Students appeared to be quite knowledgeable about the wide range of career areas included in the field of agriculture. The subject which they perceived most highly related to agriculture was farming (78.8%). This was followed by agricultural business (68.9%), soils (66.7%) and environmental science (65.5%). Subjects least associated with agriculture were home maintenance (20.4%), leadership development (33.3%), recreation and parks management (36.6%) and biotechnology (38.7%).

Value terms possibly associated with agriculture:

The percentage of students who felt that the following were good descriptors of the field of agriculture were: Important to the economy (56.5%), important to society (45.2%), a skilled job and requires a high school education (44.1%). The students viewed the following as least associated with agriculture: Irrelevant in 1990's (16.1%), nonbusiness alternative (19.4%), high status (24.7%) and politically important (26.9%). The majority of students believe that agriculture is relevant and business oriented but not high status or politically important.

Value terms possibly associated with environmental science:

When students were asked how descriptive the same terms were of environmental science the results varied slightly. Terms most frequently identified were: Important to the economy (58.1%), important to society (57%), politically important (53.3%) and requires college education (48.4%). The least accurate descriptors were perceived to be nonbusiness alternative and irrelevant in the

1990's (20.5%), something only farmers do (23.7%) and something anyone can do (26.9%). The major difference between agriculture and environmental science is that environmental science is perceived to be more important to society and politically more important than agriculture.

Perceptions of relationship of agriculture to other academic courses:

Most students did not perceive the integration of agriculture and academic courses. Only 29.1% felt that you could learn science by understanding agriculture. Conversely, 34.8% felt you could learn agriculture by understanding science. The relationship of mathematics to agriculture (24%) and of communication and agriculture was less than for science.

Personal Traits

Gender and race:

Forty-six percent (45.7) % of students surveyed were male and 53.2% female. 8.5% considered themselves black, 72.3% Caucasian, 1.1% Asian and 17% Hispanic. Many of the non-caucasian students are clustered in the New York City pilot school.

Use of time out of school:

Reading for pleasure is not a popular past-time among students. Over 34% mentioned that they did no reading for pleasure in the past week. Similarly, 31% did not read the newspaper. Conversely, television was very popular with 73% watching at least 1-10 hours per week and 68% watching 1-10 hours on the weekend.

Perception of best friends:

Most students viewed their friends as being good students. Fifty three percent (53.4%) felt their closest friend got good grades, 45.3% said this person was interested in school and 65.5% said this person planned to continue their education after high school. Sixty three percent (62.6%) felt their closest friend was popular and 23.3% felt this person was interested in agriculture.

How students feel they are viewed by peers:

When asked about their self-perception of how other students view them, approximately 41.1% said popular, 45.9% smart and 42.7% cool. Fifty six percent (56.3%) said they were good students. However, one fifth of the students felt that they were troublemakers.

Social/Economic priorities:

Personal relationships:

When asked to rate their perceptions of what was important in life on a scale of 1 to 5, (1=no importance and 5=very important) students felt that personal relationships such as friends and family were very important (ranked 4 or above). 70.3% said finding the right person to marry was important, 69.5% strong friendships, 69% a good family life, 53.8% having children, and 42.6% wanted to stay close to relatives.

Financial stability:

Financial stability was also important to students. 75.1% rated being successful in work a 4 or above. In the same category was 71.9% being able to find steady work and 59.3% having lots of money.

Supporting family and community:

Supporting a family and community was also important to students. Sixty seven percent (66.7%) wanted to give their children better opportunities than they had had and 40.1% felt being a community leader was important. Only 35.9% were concerned about correcting social inequalities.

Present circumstances:

Students were not very satisfied with their present circumstances. Sixty percent (60.1%) were interested in getting out of school, 46.2% considered getting out of their community important, and 28.6% were eager to get away from their family. Sixty five percent (64.7%) felt protecting themselves was important. This may indicate a feeling that they are not protected by others in their

family or community or that they perceive their surroundings as relatively hostile.

Quality of life:

Quality of life was important to students. A full 67.7% felt being happy was important while 67.5% were concerned about having leisure time to enjoy life.

Social acceptance:

Social acceptance was also very important to students. Fifty percent (50%) felt being athletic was important, 47% rated popularity and 32% felt being cool was important. Additionally, 19.8% rated being a troublemaker as important.

Educational ability:

Educational ability was important. Sixty-six percent (65.9%) gave importance to being smart and being a good student.

Work Experience

Type and time of work experience:

Eighty-seven percent (87.2%) of students had worked either for pay or as a volunteer in the past year. Most students (74.4%) do both paid and unpaid work.

Almost one third of the students (30.6%) had non-farm work experience related to agriculture, 29.4% had done farm work and 30.6% do other Ag related work. Fewer students have agricultural experience than those who have experiences of other types. 77.9% do home chores, 71% baby-sit, 39% do other non-agriculture work Students work weekends (65.1%), evenings (54.7%) and summers (79.1%).

Perceptions of relatedness of work experience to academic subjects:

Less than a third of the students felt that their work experience was related either to math (29.4%) or science (31.5%). Over half felt it

was highly related to English and communications (58.7%) and 44.6% felt it was related to technology.

Work experience interest:

Over a third of the students were interested in work experience which allowed them to be released early from class and three quarters were interested in work related to their future careers (85.1%) or to summer employment (74.5%).

Career Interests

Perceptions of agriculture career satisfaction:

For the following discussion, in cases where the percentage of students rating the job a 1 is greater than or equal to 30% this percentage is listed after the percentage of students rating the job a 4 or a 5. Additionally, in cases where more than 10% of the students said they did not have enough information (NEI) to answer the question this percentage is also given.

Environmental Sciences:

Students appear to be less interested in environmental jobs than they are in taking environmental courses. The following jobs are listed in decreasing order of popularity: "Water Quality Engineer" (27.9%, 34.8%), "Forester" (25.5%, 32.2%), and "Environmental Scientist" (24.4%).

Natural Resource Management:

Jobs in natural resource management are also popular with less than one third of the students. Job areas include the following: "Wildlife Manager" (32.2%), "Recreation/Parks Manager" (27.0%), "Environmental Manager" (26.7%, 30%), "Natural Resource Manager (24.8%),"Agribusiness Manager" (21.1%, 44.4%) and "Recycle Center Manager" (20.2%, 32.6%).

Animal Sciences:

Students were most interested in jobs related to animal science. Over forty percent of the students rated their enjoyment of a career as a "Small Animal Caretaker" as being high or very high (41.5%).

Less popular jobs were the following: "Large Animal Science (33.3%, 31.1%), "Horse Manager" (31.2%, 33.3%) and "Veterinarian" (24.1%).

Plant and Soil Sciences:

Jobs in plant and soil science are less interesting to students than jobs in animal science. Students rated their interest in all jobs as high or very high less than 30% of the time. The following jobs are listed in decreasing order of popularity: Plant Scientist (17.8%, 40%) and Soils Technician (13.4%, 50%, NEI=11.1%).

Ornamental Horticulture:

Jobs in this field were generally popular with less than a quarter of the students. The most popular jobs were "Florist" (27.8%) , "Landscaper" (25.6%) and "Landscape Architect" (24.7%). Less popular jobs were "Horticulturalist" (19.1%, 39.3%) and "Landscape Gardener (18.9%, 37.8%).

Agricultural Business:

Students perceived themselves as having even less interest in economic or financial careers. Both finance jobs listed received high interest ratings less than 20% of the time: They are the following: "Accountant for Agricultural Company" (18.9%, 40%), and "Financial Consultant" (17.7%, 48.9%). Management-oriented jobs were also not very popular. These included the following: "Developing Business Systems (24.7%, 30.3%, NEI=12.4%), "Sales Manager"(20.2%, 44.9%), "Manager for an Agricultural Company" (20%, 35.6%, NEI=11.1%),"Agway Store Manager (15.7%, 43.8%, NEI=12.4), "Statistician" (14.5%, 37.8%), "Agway Chemical Company Sales Representative" (12.3%, 43.8%, NEI=11.2%), and "Wholesaler for Agricultural Supplies" (12.2%, 48.9%, NEI=14.4%).

Agricultural Literacy:

"Rancher" received the highest ratings of any basic agricultural job (26.6%, 32.2%). This was followed closely by jobs as a"Farmer" (24.4%, 42.2%), in "Other agriculturally-related jobs (21.4%, 43.8%), in "Agricultural Engineering" (17.8%, 43.3%), in "Agricultural and Related Jobs" (16.6%, 40%), and in "Agricultural Science and Technology" (15.6%, 42.2%).

Agricultural Mechanization:

All jobs in this category received ratings of high or very high less than twenty (20%) percent of the time. The following jobs are listed in decreasing order of popularity: "Agricultural Structures Architect" (19%, 48.3%), "Building Contractor" (17.8%, 41.1%), "Agricultural Mechanics"(17.8%, 52.2%), "Construction Manager" (14.4%, 50%), "Agricultural Equipment Repair" (13.4%, 46.7%), "Agricultural Power Technician" (12.3%, 44.9%, NEI=11.2%), and "Agricultural Equipment designer" (12.2%, 45.6%).

Biotechnology:

The only three jobs listed received interest ratings of slightly over twenty percent (20%). They are: "Biotechnology Technician" (25.6%, 37.8%), "Biologist" (23.3%, 44.4%) and "Laboratory technician" (21.1%, 31.1%).

Agricultural Education:

Students are quite interested in careers in Leadership/Development" (27.8%, 34.4%) and less interested in careers as "Agriculture Teacher" (22.2%, 46.7%), "Vocational Counselor" (19.4%, 42%), "Scientific Illustrator" (18.1%, 36.4%), Agricultural Legal Consultant" (16.8%, 44.9%, NEI=11.2%), "Home Maintainer/Improver" (15.5%, 36.7%),"College Professor in Agriculture" (11.2%, 51.1%) and "Author of Technical Books" (7.9%, 57.3%). It is possible that the latter two jobs are perceived as out of the reach of tenth grade students. This may account for their lack of popularity.

Food Science:

Food science job categories were popular with less than twenty (20%) of the students and included "Crop Science Technician" (18.9%, 41.1%), "Food Wholesale Supplier" (14.5%, 51.1%), and "Food Processor (13.4%, 45.6%).

Non-Agricultural Jobs:

These jobs were the most popular with an interest rating of 41.6%

Educational Background and Interests

GPA:

Almost a fifth of the students (19.1%) perceived themselves as A students, 31.9% as B students and 38.3% felt their grades were in the C range. Almost eleven percent (10.6%) reported themselves as having grades of D or below.

High school track:

74.9% of students were regents track and one third were local diploma track.

Types of courses taken:

Most students had taken or were planning to take a variety of courses including college preparatory (53.2%), vocational (24.5%), agricultural (47.9%), business (48.9%), health (52.1%), home economics (36.2%), technical (34%) and trade or industrial (28.7%).

Scheduling:

Thirty two (32.1%) percent of students felt that scheduling prevented their enrollment in an agriculture course.

Type of sequence:

Forty four percent (44%) of the students were planning to take an academic sequence, twenty six percent (26%) agricultural and seventeen percent (17%) vocational.

Plans after high school:

Most students were planning either to attend a four year college (30.9%) or to continue their education beyond a four year college (25.5%). Only 10.9% were planning to get a job and not continue their education while an additional 8.5% were planning to work a year before they went to college. Nineteen percent planned to attend a two year college for their terminal degree and an additional 17% planned on attending a two year college before transferring to a four year college.

Major in college:

Of the students planning to attend college 21.3% planned to major in agriculture, 47.9% planned another major and 28.5% were still undecided.

Influence of significant others on study of agriculture:

Students were asked whether various individuals strongly discouraged, had no influence on or strongly encouraged their study of agriculture. For only 22.6% of the students did the home school guidance counselor strongly encourage the students to study agriculture as contrasted to 31.8% who strongly discouraged them. Even more extreme results were received when asked what influence the BOCES guidance counselors had. In this case only 15.9% encouraged students whereas 36.4% strongly discouraged the study of agriculture. Similar results were received when asked about the influence of agriculture teachers (21.6% encouraged, 40.9% discouraged), administrators (11.4% encouraged, 40.9% discouraged), brothers and sisters (24.1% and 41.4%), friends (27.5%, 36.7%), newspapers (13.8%, 41.4%), vocational open-house(12.6%, 37.9%), BOCES visitation (19.8%, 32.6%) and other influences (20.5% and 30.1%). Only parents and guardians encouraged students to take agriculture (34.1%) more than they discouraged the students (32.9%).

Each potential source of influence was rated as having no influence according to between twenty five to forty one percent of the students. The groups most frequently rated as having no influence were other (41%), BOCES visitation (40.7%) and Vocational Open-house (40.2%).

Reasons for studying agriculture:

Reasons for studying agriculture most frequently rated as important or very important included the following: interest (51.1%), other (50.6%), explore careers (50.5%) and develop team work skills (50%). Reasons least frequently rated as very important were to understand academic courses (29.3%), to escape foreign language requirements (33.3%), course reputation (33.3%) and preparation for a two year college (33.3%).

Reasons for enrolling in an agriculture course:

Students felt the primary reason for enrolling in an agriculture course would be interest. Other reasons frequently given were to learn and as a means of achieving work or career goals. Additional factors which encourage students to enroll were peers, parents and family.

Reasons not to enroll in an agriculture course:

The main reason students would not enroll in a course like agriculture was that they had no interest in the subject. Additional factors which students felt prevented them from enrolling included peer and family pressure and scheduling.

Academic and career reasons for taking elective courses:

Most students felt that the primary reasons to take elective courses were to prepare for a career (67%), for a good job (64.6%) or for a wide range of jobs (54.8%). An additional 30.1% would take elective courses to prepare for a two year college and 64.5% for higher education.

Types of courses interested in taking in high school:

Environmental Sciences:

A high percentage of students were interested in taking environmental courses in high school. Courses in which at least forty percent of the students were interested in include "Recovery and Recycling" (54.9%), "Water" (44%), "Forestry" (35.4%) , "Air" (29%), "Human Population" (20.8%) and "Ecosystems" (15.8%).

It should be noted that 51.2% of the students rated "Human Population" a 2 or less.

Natural Resource Management:

Similarly, these jobs were very popular among students. Percentages include the following: "Wildlife Management (45.1%)", "Environmental Management" (40.3%), "Natural Resource Management" (40.2%) and "Recreation/Parks Management" (35.4%).

Animal Sciences:

In general, a large number of students were interested in high school courses involving "Animal Science" (54.9%), "Animal Reproduction" (53.7% with 36.6% giving a rating of 5), "Large Animal Science" (43.9%), "Veterinary Science" and "Small Animal Care" (41.5%). Slightly less popular courses were "Horse Management" (36.6%) and "Animal Nutrition and Lactation" (34.2%). The least popular animal science course was "Entomology"(13.4%). A high percentage of students (35.4%) felt that they did not have enough information to answer questions on this course.

Plant and Soil Sciences:

Students appeared less interested in plant science courses than in animal science. Courses in which at least 40% of the students gave a rating of 4 or 5 included only "Plant Science" (41.4%). Less popular courses included "Plant Breeding" (35.4%), "Crop Science" (24.4%),"Plant Physiology" (18.8% with 30% rating it a 1), and "Plant Morphology and Taxonomy" (18.3% with 23% making "Not Enough Information and 32.9% giving a rating of 1). It should be noted that a high percentage of students were not interested (rating of 2 or below) in "Soil" (53.7%). or "Soils and the Environment" (25.6%),

Ornamental Horticulture:

These courses were somewhat popular and included "Horticulture" (31.7% with 26.8% giving a rating of 'Not Enough Information') and "Landscaping" (30.5%).

Agricultural Business:

Economic and Finance courses were generally not very popular. There were no courses in which at least 40% of the students were interested. Popularity ranged from "Finance" (35.4%) and "Basic Economics" (30.5%) to Resource Economics" (25.6% with 41.5% rated 2 or below) and "Applied Economics in Agriculture" (21.9%). Students were even less interested in administrative courses such as "Management" (34.2%) and "Agribusiness Management" (19.5%).

Agricultural Literacy:

Similarly, there were no basic agriculture courses in which at least 40% of the students were interested. Percentages of interested students include "Basic Agricultural Skill" (39%), "Advanced Agricultural Skill" (26.8%),"International Agriculture" and "Introduction to Agri-science and Technology" (25.6%).

Almost 31% (30.5%) rated International Agriculture as Very Low Interest.

Agricultural Mechanics:

Students were generally not interested in mechanically-oriented courses. The most popular of these courses were "Wood working", "Living/Working Structure" and "Electricity" (30.5%). Students gave the following ratings to other courses: "Applied Physical Science in Agriculture" (31.7% with 30.5% rating a 1), "Measuring and Diagramming" (29.6%), "Agricultural Power Systems (23.2% with 20.7% making 'Not Enough Information' and 30.5% rating it a 1), "Welding/Gas cutting" (21.9% with 32.9% giving a rating of 1), "Introduction to Agricultural Mechanics" (21%), "Agricultural Power Technology" (18.3% with 34.1% giving a rating of 1), "Agricultural Structures" (17% with 36.6% giving a rating of 1).

Food Science:

The following courses were rated: "Food Science"(28% with 32.9% giving a rating of 1), "Food Science and Technology" (25.6%) and "Commodity/Materials Processing" (15.9%).

Biotechnology:

Only two courses were listed. The following ratings were given: "Biotechnology" (26.9% with 24.4% marking 'Not Enough Information'), and "Microbiology" (24.4% with 32.9% giving a rating of 1).

Agricultural Education:

Thirty-nine percent (39%) of the students were interested in "Leadership".

Types of courses interested in taking in college:

Environmental Sciences:

Students were less interested in taking these courses in college than in high school. There were no courses in which at least 40% of the students were interested. Courses listed in decreasing order of popularity include: "Forestry" (38.8%), "Water" and "Recovery and Recycling" (32.9%), "Air" (28%), "Human Population" (22%) and "Ecosystems" (12.2% with 52.4% rating it 2 or less).

Natural Resource Management:

Popularity of these courses was also less than in high school. Percentages include: "Wildlife Management" (31.7% with 34.2% giving a rating of 2 or less), "Recreation/Parks Management" (31.3%), "Natural Resource Management" (29.8%) and "Environmental Management" (29.3%),

Animal Sciences:

Students were still very interested in taking animal science courses in college. Courses in which at least 40% of the students were interested in include: "Veterinary Science" (48%), "Small Animal Care" (44.2%), "Animal Nutrition and Lactation" (43.9%), "Large Animal Science" (41.8%), "Animal Science" and "Animal Reproduction" (41.5%). The only courses listed in which less than 40% of the students were interested were "Horse Management (31.7%) and "Entomology" (11.5% with 34.6 rating 'Not Enough Information' and 41% rating a 1).

Plant and Soil Sciences:

Students were less interested in taking plant and soil science courses in college. The following courses are listed in decreasing order of popularity: "Plant Science" (34.1% with 43.9% rating a 2 or less), "Plant Breeding" (26.8% with 53.7% rating 2 or below), "Plant Morphology and Taxonomy" (24.4% with 45.1% rating 2 or below),"Soils and the Environment" (21% with 53.1 rating a 2 or less), "Soil" (20.7% with 52.4% rating it 2 or less), "Crop Science" (20.2% with 51.9% rating 2 or less) and "Plant Physiology" (15.9% with 48.8% rating 2 or below).

Ornamental Horticulture:

Similarly, these courses were not very popular among the students and included: "Landscaping" (29.1%) and Horticulture" (20% with 48.8% rating 2 or less).

Food Sciences:

Approximately one quarter of the students were interested in taking courses related to food sciences. These courses include: "Food Science" (25.6% with 52.6% rating 2 or less) and "Food, Science and Technology" (24.1% with 51.9 rating 2 or less).

Agricultural Business:

Students were most interested in finance-oriented courses such as "Accounting/Financial" (40.3%), and "Finance" (30.5%). Other, less popular finance courses include: "Basic Economics" (26.8%),"Applied Economics in Agriculture" (25.7% with 51.2% rating 2 or less), and "Resource Economics" (21.9%). Administrative courses received higher ratings by the students such as "Management" (44.6%), "Marketing" (43.9%) and "Agribusiness Management" (23.8% with 53.8% listing 2 or less).

Agricultural Literacy:

Students were less interested in taking basic agricultural courses in college than in high school. The following courses are listed in decreasing order of popularity: "Advanced Agriculture Skill" (27.3% with 53.1% rating 2 or less), "International Agriculture" (16% with 64.2% giving a rating of 2 or less) and "Introduction to Agri-science/technology" (13.6% with 53.1 rating 2 or less).

Agricultural Mechanics:

Students were also not very interested in taking mechanical courses in college. Courses listed in decreasing order of popularity are the following: "Electricity" (29.5 with 50% rating a 1), "Applied Physical Sciences in Agriculture" (28%), "Living/Working Structures" (26.3%), "Welding/Gas cutting" (25.6% with 50.6% rating 2 or less), "Drafting" (25.4% with 45.6% rating 2 or less), "Agricultural Power Systems" (23.4% with 51.9% rating 2 or less), "Wood Working" (21.5% with 50.6 rating 2 or less), "Small Engine"

(20.2% with 57% rating 2 or less), "Agricultural Power Technology" (20% with 60% rating a 2 or less), "Introduction to Agricultural Mechanics" (17.7% with 62% rating 2 or less), "Measuring and Diagramming" (17% with 47.6% rating a 2 or less) and "Agricultural Structures" (15.1% with 60% rating 2 or less).

Biotechnology:

Twenty seven (27%) of the students were interested in taking "Biotechnology" in college. Information on "Microbiology" is missing.

Agricultural Education:

Thirty two percent (31.7%) of the students were interested in taking "Leadership" in college.

Strong Interest Inventory

The sample surveyed using the Strong Interest Inventory was 108. Of this total 49 were males, 55 were females and 4 were dropped since their responses did not include gender. Data from an additional 9 respondents was dropped since insufficient questions were answered to allow statistical analysis. This left 44 males and 51 females. The findings presented include an introvert/ extrovert scale, a scale of academic comfort and interest themes. All findings presented are preliminary and may not represent the population. They are simply indicators based on a very small sample in this field test. See Table 3 for these results.

Table 3

Strong Interest Inventory
Summary Results

		Males		Females	
Introvert/Extrovert Scale		n=44		n=51	
>60 (Introvert):		32		24	
40-60:		10		25	
<40 (Extrovert):		2		2	
Academic Comfort Scale					
<30 (Low comfort):		24		29	
30-50:		17		18	
>50 (High comfort):		3		4	
INTEREST THEME		**Number of Responses**			
		Males	Percent	Females	Percent
R=Realistic	Very Low	3	7	14	27
(outdoors, technical,	Low	7	16	15	29
practical)	Moderately Low	2	5	6	12
	Average	22	50	13	25
	Moderately High	7	16	3	6
	High	2	5	0	0
	Very High	1	2	0	0
I=Investigative	Very Low	20	45	22	43
(scientific, inquiring,	Low	5	11	3	6
analytical)	Moderately Low	7	16	13	25
	Average	7	16	12	24
	Moderately High	3	7	1	2
	High	1	2	0	0
	Very High	0	0	0	0
A=Artistic	Very Low	20	45	22	43
(dramatic, musical,	Low	6	14	6	12
self-expressive)	Moderately Low	7	16	11	22
	Average	7	16	11	22
	Moderately High	3	7	0	0
	High	1	2	0	0
	Very High	0	0	1	2

S=Social	Very Low	20	45	12	24
(helping, guiding,	Low	7	16	8	16
group-oriented)	Moderately Low	8	18	6	12
	Average	8	18	18	35
	Moderately High	1	2	5	10
	High	0	0	1	2
	Very High	0	0	1	2
E=Enterprising	Very Low	11	25	14	27
(entrepreneurial,	Low	10	23	9	18
persuasive, political)	Moderately Low	11	25	14	27
	Average	6	14	13	25
	Moderately High	5	11	0	0
	High	1	2	0	0
	Very High	0	0	1	2
C=Conventional	Very Low	18	41	9	18
(methodical,	Low	6	14	5	10
organized,clerical)	Moderately Low	5	11	13	25
	Average	8	18	18	35
	Moderately High	5	11	4	8
	High	2	5	1	2
	Very High	0	0	1	2

The introvert/extrovert scale measures an individual's sociability. The scale is normed for 50 for the average person. The average for introverts is 60 and for extroverts is 40. High scores on this scale (approximately 60) indicate a not particularly talkative person. Low scores (<=40) indicate a person who is relatively comfortable in social settings. The lower the score the more this is true. Scores of 35 and below show a very talkative person.

The academic comfort scale is a rough measure of the degree of comfort a person may feel in an academic setting, particularly a good liberal arts and science university setting. It is not a measure of ability. A score of 50 or above indicates an intellectually curious person. A low score (<=30) indicates a practical, straightforward person. Strong recommends that anyone with a score over 55 be encouraged to go to graduate school.

Interest themes underlie occupational areas. The Strong Interest Inventory further breaks down each interest into related occupations and compares the individuals interest profile to the profile of individuals already working in and enjoying particular careers.

As Table 3 indicates, a high percentage of students surveyed were introverts (32% of males, 24% of females). An equally high percentage of students received low scores on the Academic Comfort Scale (24% of males, 29% of females). These results suggest a student population lacking adequate social and academic skills.

An examination of interest themes indicates that the majority of students received scores on the low end of the interest spectrum in each of the six interest themes examined. Less than 8% of students received scores of high or very high in any interest theme. This suggests a population of students who have few occupational interests.

Conclusions

The researcher developed instrumentation will meet the project needs after refinement to enhance the reliability of selected subscales. The instrument was also found to be content valid.

The Strong Interest Inventory is useful in career counseling and provides a benchmark to compare ATP students with a nationally normed cohort. Yet, the cost of this instrument may be prohibitive, approximately four dollars per student.

The researcher developed instrument should be administered in late Fall 1992 or early Spring 1993 prior to student registration. The findings could be useful to guidance counselors and teachers at the time students register for the Fall 1993 ATP program, as well as serving an evaluation purpose.

APPENDIX A

MEMO TO: Margaret Corbellini
Terry Hughes
Dee Jobe

FROM: Dean Sutphin and Mhora Newsom-Stewart

DATE: June 10, 1992

RE: Tech Prep Pilot Study

In order to insure that the pilot study goes as smoothly as possible it is necessary that each administrator follow a similar format. During our pretest we determined that the following format worked best.

First: Discuss with the students the importance of the survey and the necessity to think about answers before writing them down. Read the instructions found on page two of each part of the survey. Point out the fact that the survey does ask personal questions and that these are necessary to determine if certain types of certain students think differently about ag than others: Without this explanation during the pretest we found we got resentment from some students.

Administer the survey as follows:

One third of the students get the Strong Interest Inventory, one third get parts one, two and five of the tech prep and the last third get parts three, four and five of the tech prep. Part one needs a five response bubble sheet (the blue one) , parts 3, 4 and 5 need a 10 response bubble sheet (the green ones). Part two is a fill in the blank questionnaire. Therefore, students will need to write their i.d. numbers on the top of Part 2. There is a space available for this.

The Strong Inventory is self-contained, no i.d numbers are needed. However, please insure than students write their names on the bubble sheets. Please ask students taking our survey to fill out the section in the lower left hand corner of the bubble sheet titled i.d. number or the top of part two with numbers assigned as follows:

A and B are respectively

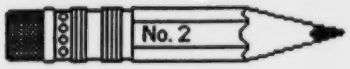
01=Moravia School
02=St. Johnsville
03=Friendship
04=John Bowne
05=Tri-Valley
06=Greenville
07=Lowville

C=3 (Spring)
D and E are 9 and 2 respectively (Year)
F and G are 0 and 6 respectively (Month)
H and I are the student's grade, in most cases a 1 and 0 (10th)
J and K and L are the students i.d. number.
M = part of the survey the student is taking, (# 1,3,4 or 5)

Please number the students in each school starting with a 1. It is very important that a name be associated with each number so that we can follow the students up three years from now. We found it most useful to get a roster and assign numbers and then tell the students what their individual number is. Please hand in the rosters with names and associated i.d. numbers when the survey forms are handed in.

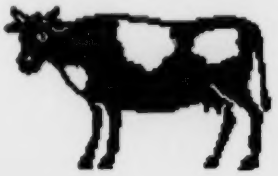
Thank you for your help!! Good luck administering the surveys.

APPENDIX B



Tenth Grade Home School Survey For Agri-Tech Prep 2000

PART 1



PLEASE READ:

This questionnaire is designed to help plan curriculum in the public school system. The information you give will never be associated with you. Please do not write your name on this questionnaire or on the answer sheets.

Thank you in advance for your help with this.

10th GRADE HOME SCHOOL

Part One

INSTRUCTIONS: Please answer the following questions in order. Answer quickly; first impressions are important. Once you have shaded your answer, do not review or change your answer.

1. My eyes are:

   A. __blue
   B. __green
   C. __brown
   D. __black
   E. __other

2. Last week I:

   A. __went to a movie
   B. __went to a sporting event
   C. __saw a play
   D. __did none of the above

3. I am a :

   A. __ male
   B. __female

4. I consider myself:

   A. __black
   B. __white
   C. __American Indian or Alaskan Native
   D. __Asian or Pacific Islander
   E. __Hispanic
   F. __Other

5. In the last year, have you worked anywhere either for pay or as a volunteer (this includes home chores such as lawn and garden work)?

   A.__Yes
   B.__No

If you answered question 5 "Yes," then for the next group of questions please check whether or not you have done this type of work. Work may include both paid and unpaid as well as home chores. If you answered question 5 "No" go on to question 20 .

WORK EXPERIENCE

	A=Yes	B=No
6. Store-including clerk, grocery bagger, etc.	Y	N
7. Nonfarm related to agriculture	Y	N
8. Home chores such as lawn and garden work	Y	N
9. Farm	Y	N
10. Babysitter	Y	N
11. Waiter or waitress or other food related job	Y	N
12. Newspaper carrier	Y	N
13. Other non-agriculture	Y	N
14. Other agriculturally related	Y	N

For the following four questions please check yes if you work during that time and no if you don't. Work can include both paid and unpaid as well as home chores.

	A=Yes	B=No
15. At many times around my home	Y	N
16. Weekends outside my home	Y	N
17. Evenings after school outside my home	Y	N
18. Summer outside my home	Y	N

19. My work experience includes:

A. Paid
B. Unpaid
C. Both

Directions: On the bubble sheet for questions with many responses please fill in the bubble for A if your answer is 1, B if your answer is 2, C if your answer is 3, D if your answer is 4 and E if your answer is 5 and so on.

Thinking about your work experience so far and what you might do before graduating from high school, how related do you think your work experience will be to the following:

		not related				highly related
20.	Math	1	2	3	4	5
21.	Science	1	2	3	4	5
22.	English/Communications	1	2	3	4	5
23.	Technology	1	2	3	4	5

How interested would you be in the following types of work experience before you graduate from high school?

		No interest				Highly interested
24.	Experiences which allow me to be released early from classes each day to work	1	2	3	4	5
25.	Experiences related to my future career	1	2	3	4	5
26.	Summer employment related to my future career	1	2	3	4	5

YOUR HIGH SCHOOL PLANS

27. I plan to follow the:

A. regent's track
B. local diploma track

For the next group of questions please check whether you have taken, are taking or plan to take the following types of courses:

	A=Yes	B=No
28. College Preparatory	Y	N
29. Vocational	Y	N
30. Agricultural	Y	N
31. Business	Y	N
32. Health	Y	N
33. Home economics	Y	N
34. Technical	Y	N
35. Trade or industrial	Y	N

36. What are your plans to take a sequence in high school? (check as many as apply)

A. agriculture
B. vocational
C. academic

For the following group of questions please check Yes, No, or undecided.

	A=Yes	B=No	C=Undecided
37. Finish high school, get a job instead of attending college	Y	N	U
38. Attend a two year college after high school	Y	N	U
39. Attend a two year college, then transfer to a four year college	Y	N	U
40. Attend a four year college immediately after high school	Y	N	U
41. Attend college beyond a four year degree	Y	N	U
42. Work a year then go to college	Y	N	U
43. Other educational plans:	Y	N	U

44. If I go to college, I plan to major in:

A. Will not attend college
B. Agriculture
C. Something besides agriculture
D. Don't know yet

45. My approximate overall grade average this year is (fill in appropriate circle on the answer sheet)

A. A (90-100)
B. B (80-90)
C. C (70-80)
D. D (65-70)
E. F (<65)

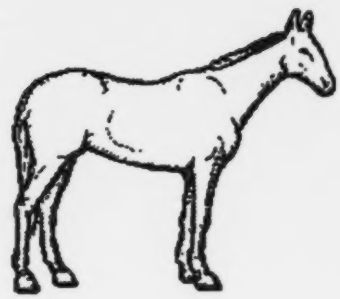
My reason for taking elective courses would be to: Please rate your interest on a scale of 1 to 5.

	Low interest			High Interest	
46. Prepare me for a specific future career.	1	2	3	4	5
47. Prepare me for a two year college.	1	2	3	4	5
48. Prepare me to get a good job.	1	2	3	4	5
49. Prepare me for higher education.	1	2	3	4	5
50. Prepare me for a wide range of jobs.	1	2	3	4	5

To what extent are the following terms related to agriculture? Please rate:

	Very Low			Very High	
51. food marketing industry	1	2	3	4	5
52. food processing	1	2	3	4	5
53. farming	1	2	3	4	5
54. agricultural business	1	2	3	4	5
55. horticulture	1	2	3	4	5
56. conservation	1	2	3	4	5
57. agricultural machinery	1	2	3	4	5
58. environmental science	1	2	3	4	5
59. recycling	1	2	3	4	5
60. landscaping	1	2	3	4	5
61. gardening	1	2	3	4	5
62. plant science	1	2	3	4	5
63. plant breeding	1	2	3	4	5
64. forestry	1	2	3	4	5
65. hydrology/water quality	1	2	3	4	5
66. fisheries and wildlife	1	2	3	4	5
67. retail florist	1	2	3	4	5
68. agricultural engineering	1	2	3	4	5
69. Agriscience and technology	1	2	3	4	5
70. Soils	1	2	3	4	5
71. Ag Mechanics	1	2	3	4	5
72. Ag Structures	1	2	3	4	5
73. Ag Power Technology	1	2	3	4	5
74. Agribusiness management	1	2	3	4	5
75. Horticulture	1	2	3	4	5
76. Wildlife management	1	2	3	4	5
77. Natural Resources manage.	1	2	3	4	5
78. Recreation and Parks management	1	2	3	4	5
79. Veterinarian Science	1	2	3	4	5
80. Small Animal Care	1	2	3	4	5
81. Biotechnology	1	2	3	4	5

82. Animal Science-Large Animals	1	2	3	4	5
83. Horse Mangement	1	2	3	4	5
84. Crop Scientist	1	2	3	4	5
85. Food Science and Technology	1	2	3	4	5
86. Leadership Development	1	2	3	4	5
87. Home Maintenance	1	2	3	4	5



To what extent do you consider the following as descriptive of agriculture?

	Not Descriptive				Very Highly Descriptive
88. politically important	1	2	3	4	5
89. important to the economy	1	2	3	4	5
90. Important to society	1	2	3	4	5
91. a good way to make money	1	2	3	4	5
92. practical	1	2	3	4	5
93. something only farmers do	1	2	3	4	5
94. something business oriented	1	2	3	4	5
95. a good career track	1	2	3	4	5
96. rough, outdoor work	1	2	3	4	5
97. high tech	1	2	3	4	5
98. irrelevant in 1990's and beyond	1	2	3	4	5
99. something anyone can do	1	2	3	4	5
100. a nonbusiness career alternative	1	2	3	4	5
101. high status	1	2	3	4	5
102. a skilled job	1	2	3	4	5
103. requires a college education	1	2	3	4	5
104. requires at least a high school education	1	2	3	4	5

To what extent do you consider the following descriptive of environmental science?

	Not Descriptive				Very Highly Descriptive
105. politically important	1	2	3	4	5
106. important to the economy	1	2	3	4	5
107. Important to society	1	2	3	4	5
108. a good way to make money	1	2	3	4	5
109. practical	1	2	3	4	5
110. something only farmers do	1	2	3	4	5
111. something business oriented	1	2	3	4	5
112. a good career track	1	2	3	4	5

113. rough, outdoor work	1	2	3	4	5
114. high tech	1	2	3	4	5
115. irrelevant in 1990's and beyond	1	2	3	4	5
116. something anyone can do	1	2	3	4	5
117. a nonbusiness career alternative	1	2	3	4	5
118. high status	1	2	3	4	5
119. a skilled job	1	2	3	4	5
120. requires a college education	1	2	3	4	5
121. requires at least a high school education	1	2	3	4	5

In my opinion, the number of jobs in the future in the following areas will be:

	Very Low				Very High
122. farming	1	2	3	4	5
123. agricultural business	1	2	3	4	5
124. horticulture	1	2	3	4	5
125. conservation	1	2	3	4	5
126. agricultural machinery	1	2	3	4	5
127. environmental science	1	2	3	4	5
128. recycling	1	2	3	4	5
129. landscaping	1	2	3	4	5
130. gardening	1	2	3	4	5
131. plant science	1	2	3	4	5
132. plant breeding	1	2	3	4	5
133. forestry	1	2	3	4	5
134. hydrology/water quality	1	2	3	4	5
135. fisheries and wildlife	1	2	3	4	5
136. retail florist	1	2	3	4	5

In my opinion, the annual salary for each job is: (fill in only one bubble for each job)

	Very Low				Very High
137. farming	1	2	3	4	5
138. agricultural business	1	2	3	4	5
139. horticulture	1	2	3	4	5
140. conservation	1	2	3	4	5
141. agricultural machinery	1	2	3	4	5
142. environmental science	1	2	3	4	5
143. recycling	1	2	3	4	5
144. landscaping	1	2	3	4	5

145. gardening	1	2	3	4	5
146. plant science	1	2	3	4	5
147. plant breeding	1	2	3	4	5
148. forestry	1	2	3	4	5
149. hydrology/water quality	1	2	3	4	5
150. fisheries and wildlife	1	2	3	4	5
151. retail florist	1	2	3	4	5

Please rate your agreement with the following statements about how agriculture relates to other academic courses:

	Strongly Disagree				Strongly Agree
152. I can learn science by understanding agriculture.	1	2	3	4	5
153. I can learn agriculture by understanding science.	1	2	3	4	5
154. I can learn math by understanding agriculture.	1	2	3	4	5
155. I can learn agriculture by understanding math.	1	2	3	4	5
156. I can learn communication by understanding agriculture.	1	2	3	4	5
157. I can learn agriculture by understanding communication.	1	2	3	4	5

Would you study agriculture in high school for the following reasons? Please check A(yes) or B(no).

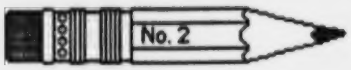
	YES	NO
158. Preparation for job	Y	N
159. Preparation for two year agricultural college	Y	N
160. Preparation for a four year college	Y	N
161. Develop leadership	Y	N
162. Develop life skills	Y	N
163. Explore careers	Y	N
164. Develop citizenship	Y	N
165. Develop team work skill	Y	N
166. General education	Y	N
167. A way to understand academic courses	Y	N
168. To escape foriegn language requirement	Y	N
169. If it counted as a second science in my sequence	Y	N
170. If I could get college credit while in high school	Y	N
171. If I could receive automatic college admissions	Y	N
172. To be with my friends	Y	N
173. My ability	Y	N

174. Interest	Y	N
175. Type of learning activities (lab/hands on)	Y	N
176. Youth organization activities	Y	N
177. work or coop experience	Y	N
178. Course reputation	Y	N
179. Other	Y	N

180. How does scheduling affect your enrolling in agriculture? Choose A or B

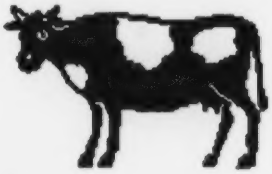
A Scheduling is not a problem
B Scheduling conflicts prevented my enrollment.

THANK YOU FOR DOING THIS SURVEY!!!



Tenth Grade Home School Survey For Agri-Tech Prep 2000

PART 2



PLEASE READ:

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Thank you in advance for your help with this.

DO NOT WRITE IN THIS SPACE

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

School Season Year Month Grade Student Number

10th GRADE HOME SCHOOL

Part TWO

INSTRUCTIONS: Please answer the following questions in order. Answer quickly; first impressions are important. Do not return to questions once they have been completed.

1. What do you consider a **very low** salary to be in dollars?_____
2. What do you consider a **low** salary to be in dollars?_____
3. What do you consider an **average** salary to be in dollars?_____
4. What do you consider a **high** salary to be in dollars?_____
5. What do you consider a **very high** salary to be in dollars?_____

6. The primary reason that students would enroll in a course like agriculture is:

_____

7. The primary reason that students would not enroll in a course like agriculture is:

_____

8. What factors do you feel prevent students from enrolling in agricultural courses in high school?

_____

9. What do you feel gets students to enroll in agricultural courses in high school?

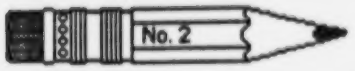
_____

9. My plans are to find a job within _____miles of the place where I now live.

10. I plan to attend college within _____miles of the place where I now live.

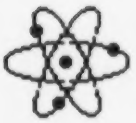
11. The longest trip I've been to is _____. You may write a place or a number of miles in this line.

Thank you for filling out this survey!



Tenth Grade Home School Survey For Agri-Tech Prep 2000

PART 3



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10th GRADE HOME SCHOOL

Part Three

INSTRUCTIONS:

For the next set of questions please rate your interest in studying the following topics in high school . If you don't have enough information about the topic to answer the question please mark the column "not enough info." On the bubble sheet please mark A for 1, B for 2, C for 3, D for 4, E for 5 and F for NEI.

Please answer the questions in order. Answer quickly; first impressions are important. Do not return to questions once they have been completed.

	Very Low				Very High	Not Enough Info.
1. Ecosystems	1	2	3	4	5	NEI
2. Human population	1	2	3	4	5	NEI
3. Soil	1	2	3	4	5	NEI
4. Water	1	2	3	4	5	NEI
5. Air	1	2	3	4	5	NEI
6. Resource Economics	1	2	3	4	5	NEI
7. Recovery and Recycling	1	2	3	4	5	NEI
8. Environmental Mgmt	1	2	3	4	5	NEI
9. Plant Science	1	2	3	4	5	NEI
10. Animal Scienc	1	2	3	4	5	NEI
11. Microbiology	1	2	3	4	5	NEI
12. Plant Morphol. and Taxonomy	1	2	3	4	5	NEI
13. Plant Physiology	1	2	3	4	5	NEI
14. Animal Nutr. and Lactation	1	2	3	4	5	NEI
15. Plant Breeding	1	2	3	4	5	NEI
16. Animal Reproduction	1	2	3	4	5	NEI
17. Applied Econ. in Agriculture	1	2	3	4	5	NEI
18. Basic Economics	1	2	3	4	5	NEI
19. Marketing	1	2	3	4	5	NEI
20. Management	1	2	3	4	5	NEI
21. Accounting/Financial	1	2	3	4	5	NEI
22. Finance	1	2	3	4	5	NEI
23. Applied Physical Sciences in Agriculture	1	2	3	4	5	NEI
24. Measuring and Diagramming	1	2	3	4	5	NEI

25.	Agricultural Power Systems	1	2	3	4	5	NEI
26.	Structures for Living and Working	1	2	3	4	5	NEI
27.	Commodity and Materials Processing	1	2	3	4	5	NEI
28.	International Ag	1	2	3	4	5	NEI
29.	Basic Ag Skill	1	2	3	4	5	NEI
30.	Advanced Ag Skills	1	2	3	4	5	NEI
31.	Intro to Agri-science and technology	1	2	3	4	5	NEI
32.	Soils and our Environment	1	2	3	4	5	NEI
33.	Intro. to Ag Mechanics	1	2	3	4	5	NEI
34.	Ag Structures	1	2	3	4	5	NEI
35.	Ag Power Technology	1	2	3	4	5	NEI
36.	Agribusiness mgmt	1	2	3	4	5	NEI
37.	Horticulture	1	2	3	4	5	NEI
38.	Wildlife management	1	2	3	4	5	NEI
39.	Natural Resources mgmt	1	2	3	4	5	NEI
40.	Recreation and Parks mgmt	1	2	3	4	5	NEI
41.	Forestry	1	2	3	4	5	NEI
42.	Landscaping	1	2	3	4	5	NEI
43.	Veterinarian Science	1	2	3	4	5	NEI
44.	Small Animal Care	1	2	3	4	5	NEI
45.	Biotechnology	1	2	3	4	5	NEI
46.	Animal Science-Large Animals	1	2	3	4	5	NEI
47.	Horse Mangement	1	2	3	4	5	NEI
48.	Crop Science	1	2	3	4	5	NEI
49.	Food Science	1	2	3	4	5	NEI
50.	Leadership	1	2	3	4	5	NEI
51.	Wood working	1	2	3	4	5	NEI
52.	Welding and gas cutting	1	2	3	4	5	NEI
53.	Small engine	1	2	3	4	5	NEI
54.	Drafting	1	2	3	4	5	NEI
55.	Food, Science and Technology	1	2	3	4	5	NEI
56.	Electricity	1	2	3	4	5	NEI
57.	Entomology	1	2	3	4	5	NEI

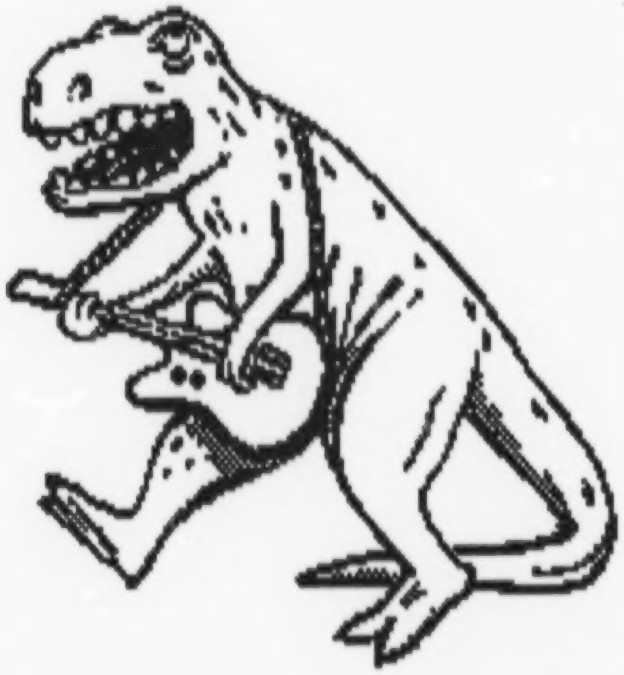
For the next set of questions please rate your interest in studying the following topics in college .

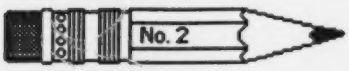
		Very Low				Very High	Not Enough Info.
58.	Ecosystems	1	2	3	4	5	NEI
59..	Human population	1	2	3	4	5	NEI
60.	Soil	1	2	3	4	5	NEI
61.	Water	1	2	3	4	5	NEI
62.	Air	1	2	3	4	5	NEI
63.	Resource Economics	1	2	3	4	5	NEI

64. Recovery and Recycling	1	2	3	4	5	NEI
65. Environmental Mgmt	1	2	3	4	5	NEI
66. Plant Science	1	2	3	4	5	NEI
67. Animal Science	1	2	3	4	5	NEI
68. Plant Morphol. and Taxonomy	1	2	3	4	5	NEI
69. Plant Physiology	1	2	3	4	5	NEI
70. Animal Nutr. and Lactation	1	2	3	4	5	NEI
71. Plant Breeding	1	2	3	4	5	NEI
72. Animal Reproduction	1	2	3	4	5	NEI
73. Applied Econ. in Agriculture	1	2	3	4	5	NEI
74. Basic Economics	1	2	3	4	5	NEI
75. Marketing	1	2	3	4	5	NEI
76. Management	1	2	3	4	5	NEI
77. Accounting/ Financial	1	2	3	4	5	NEI
78. Finance	1	2	3	4	5	NEI
79. Applied Physical Sciences in Agriculture	1	2	3	4	5	NEI
80. Measuring and Diagramming	1	2	3	4	5	NEI
81. Agricultural Power Systems	1	2	3	4	5	NEI
82. Structures for Living and Working	1	2	3	4	5	NEI
83. Commodity and Materials Processing	1	2	3	4	5	NEI
84. International Ag	1	2	3	4	5	NEI
85. Advanced Ag Skills	1	2	3	4	5	NEI
86. Intro to Agriscience and technology	1	2	3	4	5	NEI
87. Soils and our Enviroment	1	2	3	4	5	NEI
88. Intro. to Ag Mechanics	1	2	3	4	5	NEI
89. Ag Structures	1	2	3	4	5	NEI
90. Ag Power Technology	1	2	3	4	5	NEI
91. Agribusiness mgmt.	1	2	3	4	5	NEI
92. Horticulture	1	2	3	4	5	NEI
93. Wildlife management	1	2	3	4	5	NEI
94. Natural Resources mgmt.	1	2	3	4	5	NEI
95. Recreation and Parks mgmt.	1	2	3	4	5	NEI
96. Forestry	1	2	3	4	5	NEI
97. Landscaping	1	2	3	4	5	NEI

98. Veterinarian Science	1	2	3	4	5	NEI
99. Small Animal Care	1	2	3	4	5	NEI
100. Biotechnology	1	2	3	4	5	NEI
101. Animal Science-Large Animals	1	2	3	4	5	NEI
102. Horse Mangement	1	2	3	4	5	NEI
103. Crop Science	1	2	3	4	5	NEI
104. Food Science	1	2	3	4	5	NEI
105. Leadership	1	2	3	4	5	NEI
106. Wood working	1	2	3	4	5	NEI
107. Welding and gas cutting	1	2	3	4	5	NEI
108. Small engine	1	2	3	4	5	NEI
109. Drafting	1	2	3	4	5	NEI
110. Food, Science and Technology	1	2	3	4	5	NEI
111. Electricity	1	2	3	4	5	NEI
112. Entomology	1	2	3	4	5	NEI

Thank you for completing this questionnaire!!!





Tenth Grade Home School Survey For Agri-Tech Prep 2000

PART 4

PLEASE READ:

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Thank you in advance for your help with this.

10th GRADE HOME SCHOOL

Part Four

INSTRUCTIONS: Please answer the following questions in order. Answer quickly; first impressions are important. Do not return to questions once they have been completed. On the bubble sheet shade in A if your answer is one, B if your answer is 2, C if your answer is 3, D if your answer is 4, E if your answer is 5 and so on.

Please rate how enjoyable the following careers would be to you.
(If you don't have enough information to answer the question please check not enough information.)

	Very Low				Very High	Not Enough Info
1. Developing business systems	1	2	3	4	5	NEI
2. Florist	1	2	3	4	5	NEI
3. Landscaper	1	2	3	4	5	NEI
4. Plant Scientist	1	2	3	4	5	NEI
5. Forester	1	2	3	4	5	NEI
6. Agway store manager	1	2	3	4	5	NEI
7. Ag chemical company sales rep	1	2	3	4	5	NEI
8. Agriculture teacher	1	2	3	4	5	NEI
9. Landscape architect	1	2	3	4	5	NEI
10. Ag. legal consultant	1	2	3	4	5	NEI
11. Farmer	1	2	3	4	5	NEI
12. Environmental scientist	1	2	3	4	5	NEI
13. Water Quality engineer	1	2	3	4	5	NEI
14. Recycle center manager	1	2	3	4	5	NEI
15. Environmental manager	1	2	3	4	5	NEI
16. Laboratory Technician	1	2	3	4	5	NEI
17. Veterinarian	1	2	3	4	5	NEI
18.. Marketing Manager for ag company	1	2	3	4	5	NEI
19. Accountant for ag company	1	2	3	4	5	NEI
20. Financial consultant for ag company	1	2	3	4	5	NEI
21. Construction manager for ag business	1	2	3	4	5	NEI
22. Ag equipment designer	1	2	3	4	5	NEI
23. Author of technical books	1	2	3	4	5	NEI
24. Biologist	1	2	3	4	5	NEI
25. Building contractor for ag business.	1	2	3	4	5	NEI
26. College professor in ag.	1	2	3	4	5	NEI
27. Ag. Engineering	1	2	3	4	5	NEI
28. Food Wholesale Supplier	1	2	3	4	5	NEI
29. Food Processer	1	2	3	4	5	NEI
30. Landscape gardener.	1	2	3	4	5	NEI

31. Rancher	1	2	3	4	5	NEI
32. Sales Manager for ag comp.	1	2	3	4	5	NEI
33. Statistician	1	2	3	4	5	NEI
34. Scientific Illustrator	1	2	3	4	5	NEI
35. Vocational Counselor	1	2	3	4	5	NEI
36. Wholesaler for ag supplies	1	2	3	4	5	NEI
37. Ag Science and Technology	1	2	3	4	5	NEI
38. Ag Equipment Repair	1	2	3	4	5	NEI
39. Soils technician	1	2	3	4	5	NEI
40. Ag Mechanic	1	2	3	4	5	NEI
41. Ag Structures architect	1	2	3	4	5	NEI
42. Ag Power Technician	1	2	3	4	5	NEI
43. Agribusiness manager	1	2	3	4	5	NEI
44. Horticulturalist	1	2	3	4	5	NEI
45. Wildlife manager	1	2	3	4	5	NEI
46. Natural Resources manager	1	2	3	4	5	NEI
47. Recreation and Parks manager	1	2	3	4	5	NEI
48. Forester	1	2	3	4	5	NEI
49. Veterinarian	1	2	3	4	5	NEI
50. Small Animal Caretaker	1	2	3	4	5	NEI
51. Biotechnology technician	1	2	3	4	5	NEI
52. Animal Scientist- Large Animals	1	2	3	4	5	NEI
53. Horse Manager	1	2	3	4	5	NEI
54. Crop Science Technican	1	2	3	4	5	NEI
55. Home Maintainer and improver	1	2	3	4	5	NEI
56. Leadership and Development	1	2	3	4	5	NEI
57. Non Agricultural jobs	1	2	3	4	5	NEI
58. Agricultural and related jobs	1	2	3	4	5	NEI
59. Other ag related jobs	1	2	3	4	5	NEI

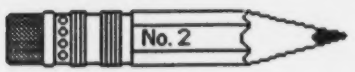
How much have you talked to the following people about planning your high school program during the past y[illegible]
Please rate on scale of not at all to a lot. If not applicable please shade in F for Not Applicable.

	Not at all				A Lot	Not Applicable
60. Your father or male guardian	1	2	3	4	5	NA
61. Your mother or female guardian	1	2	3	4	5	NA
62. A guidance counselor	1	2	3	4	5	NA
63. Teachers	1	2	3	4	5	NA
64. Friends or relatives about your own age	1	2	3	4	5	NA
65. Other adult friends or relatives	1	2	3	4	5	NA

What influence do the following have on you studying agricultural topics? Please rate scale from strongly discouraged to strongly encouraged.

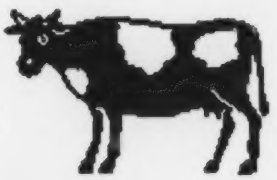
	Strongly Discouraged		No Influence		Strongly Encouraged
66. Home school guidance counselor	1	2	3	4	5
67. BOCES guidance counselor	1	2	3	4	5
68. Agriculture teacher	1	2	3	4	5
69. Administrator	1	2	3	4	5
70. Parent/Guardian	1	2	3	4	5
71. Brothers/sisters	1	2	3	4	5
72. Friends	1	2	3	4	5
73. Newspapers	1	2	3	4	5
74. Vocational open house	1	2	3	4	5
75. BOCES visitation	1	2	3	4	5
76. Other	1	2	3	4	5

Thank you for completing this survey!!!



Tenth Grade Home School Survey For Agri-Tech Prep 2000

PART 5



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Thank you in advance for your help with this.

10th GRADE HOME SCHOOL
Part 5

INSTRUCTIONS: Please answer the following questions in order. Answer quickly; first impressions are important. Do not return to questions once they have been completed.

1. How far in school do you think your parent(s) or guardian(s) want you to go? Please check all that apply.

   A. Less than high school graduation
   B. High school graduation
   C. Go to vocational, trade or business school
   D. Attend college
   E. Graduate from college
   F. Continue with education after college
   G. Don't know

2. Which of the following people live in the same household with you? Mark all that apply.

A. biological father	F. grandparents
B. other male guardian	G. my husband or wife
C. biological mother	H. my children
D. other female guardian	I. I live alone
E. brothers and/or sisters	J. friends

If you live with your mother please fill out the following questions. If not skip to question 5.

3. My mother is :

   A. Employed
   B. Unemployed

4. What was the last level of education your mother or female guardian completed? (Mark one)

   A. Finished college (Bachelor's degree)
   B. High school graduate.
   C. Less than two years of college.
   D. Two years of college.
   E. Master's degree or equivalent.
   F. PhD or equivalent
   G. Less than high school.
   H. Don't know.

If you live with your father please answer the following questions. If not skip to question 7.

5. My father is:

   A. Employed
   B. Unemployed

6. What was the last level of education your father or male guardian completed.

   A. Finished college (Bachelor's degree).
   B. High school graduate.
   C. Less than two years of college.
   D. Two years of college.
   E. Master's degree or equivalent.
   F. PhD or equivalent
   G. Less than high school.
   H. Don't know.

7. How much of her life has/did your mother or female guardian spent in the United States?

   A. All
   B. More than 20 years
   C. About 11-20 years.
   D. About 6-10 years.
   E. About 1-5 years.
   F. Don't know.

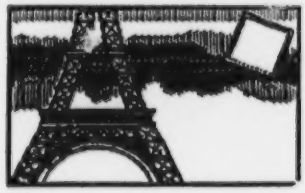
8. How much of his life has/did your father or male guardian spent in the United States?

   A. All
   B. More than 20 years
   C. About 11-20 years.
   D. About 6-10 years.
   E. About 1-5 years.
   F. Don't know.

9. How much of your life have you spent in the United States?

   A. All,
   B. More than 10 years but not all.
   C. About 6-10 years.
   D. About 1-5 years.

10. What was the first language you learned to speak when you were a child?



A. English	F. Italian
B. Spanish	G. Portugease
C. Chinese	H. German
D. Japanese	I. Polish
E. Korean	J. Other

11. What language do the people in your home usually speak?

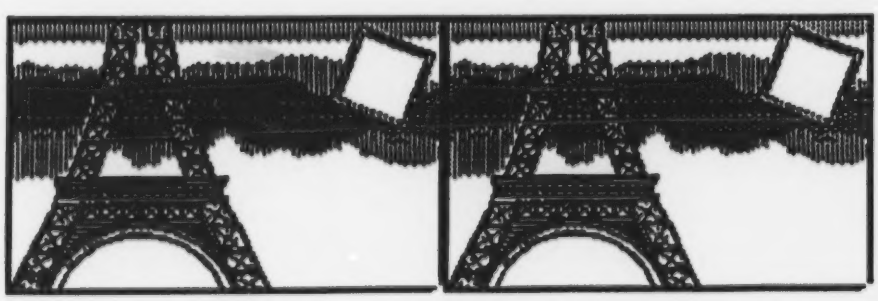
A. English	F. Italian
B. Spanish	G. Portugease
C. Chinese	H. German
D. Japanese	I. Polish
E. Korean	J. Other

Please rate how well do you do the following: A=1 B=2 C=3 D=4 E=5

		Not at all				Very Well
12.	Understand spoken English	1	2	3	4	5
13.	Speak English	1	2	3	4	5
14.	Read English	1	2	3	4	5
15.	Write English	1	2	3	4	5

Please rate the frequency of the following statements: If they are not applicable please mark the does not apply (DNA) column.
A=1 B=2 C=3 D=4 E=5

	Always				Never	Does Not Apply
16. My mother or female guardian keeps close track of how well I am doing in school.	1	2	3	4	5	DNA
17. My father or male guardian keeps close track of how well I am doing in school.	1	2	3	4	5	DNA
18. My parents or guardians almost always know where I am and what I am doing.	1	2	3	4	5	DNA



Please mark the number of hours you spend per week on the following activities outside of school. Do not include time spent on school activities.

	A= None	B= 1-3	C= 4-6	D= 7-10	E= 11-14	F=more than 14
19. Visiting with friends.	N	1-3	4-6	7-10	11-14	>14
20. Reading for pleasure.	N	1-3	4-6	7-10	11-14	>14
21. Going out on dates.	N	1-3	4-6	7-10	11-14	>14
22. Driving or riding around	N	1-3	4-6	7-10	11-14	>14
23. Talking with friends on the phone.	N	1-3	4-6	7-10	11-14	>14
24. Thinking or daydreaming.	N	1-	4-6	7-10	11-14	>14
25. Talking with your parents	N	1-3	4-6	7-10	11-14	>14
26. Reading the newspaper	N	1-3	4-6	7-10	11-14	>14
27. Watching TV during weekdays.	N	1-3	4-6	7-10	11-14	>14
28.Watching TV during weekends.	N	1-3	4-6	7-10	11-14	>14

Which of the following does your family have in your home? (Check Yes or No)

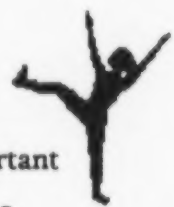
	A=Yes	B=No
29. A specific place where I study.	Y	N
30. A daily newspaper.	Y	N
31. A regularly received magazine	Y	N
32. An encyclopedia	Y	N
33. An atlas	Y	N
34. A dictionary	Y	N
35. A computer	Y	N
36. A barn	Y	N
37. More than 50 books	Y	N
38. A Calculator	Y	N
39. A room of your own	Y	N
40. A garden	Y	N
41. A lawn	Y	N
42. A quiet room to study	Y	N
43. Animals (dog, cat, etc.)	Y	N
44. None of the above	Y	N

Please think of your closest friend in your grade. Please rate your agreement with the following statements as they refer to this person. On the bubble sheet :
A=1 B=2 C=3 D=4 E=5

	Disagree Strongly				Agree Strongly
45. Gets good grades.	1	2	3	4	5
46. Is interested in school.	1	2	3	4	5
47. Attends classes regularly.	1	2	3	4	5
48. Plans to go to college.	1	2	3	4	5
49. Is popular with other.	1	2	3	4	5
50. Is interested in agriculture.	1	2	3	4	5
51. Takes vocational courses.	1	2	3	4	5

Please rate how you think other students view you.
A=1 B=2 C=3 D=4 E=5

	Disagree Strongly				Agree Strongly
52. Popular	1	2	3	4	5
53. Smart	1	2	3	4	5
54. Good student	1	2	3	4	5
55. Troublemaker	1	2	3	4	5
56. Cool	1	2	3	4	5



Please rate the importance of the following in your life:
A=1 B=2 C=3 D=4 E=5

	No importance				Very Important
57. Being successful in work.	1	2	3	4	5
58. Finding the right person to marry	1	2	3	4	5
59. Having a good family life	1	2	3	4	5
60. Having lots of money.	1	2	3	4	5
61. Having strong friendships.	1	2	3	4	5
62. Being able to find steady work.	1	2	3	4	5
63. Being a leader in my community.	1	2	3	4	5

64. Giving my children better opportunities than I had.	1	2	3	4	5
65. Living close to relatives.	1	2	3	4	5
66. Getting out of school.	1	2	3	4	5
67. Getting out of this community.	1	2	3	4	5
68. Getting away from my family.	1	2	3	4	5
69. Working to correct social and economic inequalities	1	2	3	4	5
70. Having children	1	2	3	4	5
71. Having leisure time to enjoy life.	1	2	3	4	5
72. Being happy.	1	2	3	4	5
73. Helping the environment.	1	2	3	4	5
74. Protecting myself	1	2	3	4	5
75. Being popular	1	2	3	4	5
76. Being smart	1	2	3	4	5
77. Being athletic	1	2	3	4	5
78. Being a good student	1	2	3	4	5
79. Being important	1	2	3	4	5
80. Being a troublemaker	1	2	3	4	5
81. Being cool	1	2	3	4	5

82. Does your family own or rent the house or apartment in which you live?

A. Own
B. Rent
C. Other

APPENDIX C

SELECTED FINDINGS
1991-1992
ATP SURVEY

A pilot study was conducted this summer using five of the twelve pilot schools. A brief summary of the results from this study follows. Please do not interpret these findings as representative of the ATP schools or your schools.

Family Background

Family type:

Forty-one percent of students lived in single-parent households. Of these, one forth (24.4%) lived in families with no male guardian and 17% had no female guardian. Additionally, a few students mentioned that they lived either alone (1%), with friends (5.8%) or with spouses and children (3.5%).

Parent's economic status:

Several students lived in households in which one or both parents was unemployed (37% of female guardians and 26.2% of male guardians).

Family, cultural and language background:

The multi-cultural nature of present-day society was evident in the sample. Thirty percent (30%) of parents and twenty (20%) of students were immigrants. In over twenty-five (25%) of the families English was not the native or most commonly spoken language.

Parental supervision:

Only fifty nine percent (58.6%) of students felt that their mother kept close track of them and less than half (47.9%) felt that their father did. Similarly, only 52% felt that their parents generally knew where they were and what they were doing.

Communication with parents:

Over seventeen (17%) of students never spoke with their parents and over 80% spoke with parents less than six (6) hours per week.

Perceptions of relationship of agriculture to other academic courses:

Most students did not perceive the integration of agriculture and academic courses. Only 29.1% felt that you could learn science by understanding agriculture. Conversely, 34.8% felt you could learn agriculture by understanding science. The relationship of mathematics to agriculture (24%) and of communication and agriculture was less than for science.

Personal Traits

Gender and Race:

45.7 % of students surveyed were male and 53.2% female. 8.5% considered themselves black, 72.3% Caucasian, 1.1% Asian and 17% Hispanic. Many of the non-caucasian students are clustered in the New York City pilot school.

Use of time out of school:

Reading for pleasure is not a popular past-time among students. Over 34% mentioned that they did no reading for pleasure in the past week. Similarly, 31% did not read the newspaper. Conversely, television was very popular with 73% watching at least 1-10 hours per week and 68% watching 1-10 hours on the weekend.

Perception of best friends:

Most students viewed their best friend as being a good student. Fifty three percent (53.4%) felt their closest friend got good grades, 45.3% said this person was interested in school and 65.5% said this person planned to continue their education after high school. Sixty three percent (62.6%) felt their closest friend was popular and 23.3% felt this person was interested in agriculture.

How students feel they are viewed by peers:

When asked about their self-perception of how other students view them, approximately 41.1% said popular, 45.9% smart and 42.7% cool. Fifty six percent (56.3%) said they were good students. However, one fifth of the students felt that they were troublemakers.

Social/Economic priorities:

Personal Relationships:

When asked to rate their perceptions of what was important in life on a scale of 1 to 5, (1=no importance and 5=very important) students felt that personal relationships such as friends and family were very important (ranked 4 or above). 70.3% said finding the right person to marry was important, 69.5% strong friendships, 69% a good family life, 53.8% having children, and 42.6% wanted to stay close to relatives.

Financial Stability:

Financial stability was also important to students. 75.1% rated being successful in work a 4 or above. In the same category was 71.9% being able to find steady work and 59.3% having lots of money.

Supporting family and community:

Supporting a family and community was also important to students. Sixty seven percent (66.7%) wanted to give their children better opportunities than they had had and 40.1% felt being a community leader was important. Only 35.9% were concerned about correcting social inequalities.

Present Circumstances:

Students were not very satisfied with their present circumstances. Sixty percent (60.1%) were interested in getting out of school, 46.2% considered getting out of their community important, and 28.6% were eager to get away from their family. Sixty five percent (64.7%) felt protecting themselves was important. This may indicate a feeling that they are not protected by others in their family or community or that they perceive somewhat insecure about their surroundings.

Quality of Life:

Quality of life was important to students. A full 67.7% felt being happy was important while 67.5% were concerned about having leisure time to enjoy life.

Social Acceptance:

Social acceptance was also very important to students. Fifty percent (50%) felt being athletic was important, 47% rated popularity and 32% felt being cool was important. Additionally, 19.8% rated being a troublemaker as important.

Educational Ability:

Educational ability was important. Sixty six percent (65.9%) gave importance to being smart and being a good student.

Work Experience

Type and time of work experience:

87.2% of students had worked either for pay or as a volunteer in the past year. Most students (74.4%) do both paid and unpaid work.

Almost one third of the students (30.6%) had non-farm work experience related to agriculture, 29.4% had done farm work and 30.6% do other Ag related work. Fewer students have agricultural experience than those who have experiences of other types. 77.9% do home chores, 71% baby-sit, 39% do other non-agriculture work
Students work weekends (65.1%), evenings (54.7%) and summers (79.1%).

Perceptions of relatedness of work experience to academic subjects:

Less than a third of the students felt that their work experience was related either to math (29.4%) or science (31.5%). Over half felt it was highly related to English and communications (58.7%) and 44.6% felt it was related to technology.

Work experience interest:

Over a third of the students were interested in work experience which allowed them to be released early from class and three quarters were interested in work related to their future careers (85.1%) or to summer employment (74.5%).

Educational Plans

Plans after high school:

Most students were planning either to attend a four year college (30.9%) or to continue their education beyond a four year college (25.5%). Only 10.9% were planning to get a job and not continue their education while an additional 8.5% were planning to work a year before they went to college. Nineteen percent planned to attend a two year college for their terminal degree and an additional 17% planned on attending a two year college before transferring to a four year college.

Major in college:

Of the students planning to attend college 21.3% planned to major in agriculture, 47.9% planned another major and 28.5% were still undecided.

Influence of significant others on study of agriculture:

Students were asked whether various individuals strongly discouraged, had no influence on or strongly encouraged their study of agriculture. Only 22.6% of the students were strongly encouraged by the home school guidance counselor to study agriculture as contrasted to 31.8% who were strongly discouraged. Parents and guardians encouraged students to take agriculture (34.1%) more than they discouraged the students (32.9%).

Each potential source of influence was rated as having no influence according to between twenty five to forty one percent of the students. The groups most frequently rated as having no influence were other people (41%), BOCES visitation (40.7%) and Vocational Open-house (40.2%).

Influences on Educational Plans

Reasons for studying agriculture:

Reasons for studying agriculture most frequently rated as important or very important included the following: interest (51.1%), explore careers (50.5%) and develop team work skills (50%). Reasons least frequently rated as very important were to understand academic courses (29.3%), to escape foreign language requirements (33.3%), course reputation (33.3%) and preparation for a two year college (33.3%).

Academic and career reasons for taking elective courses:

Most students felt that the primary reasons to take elective courses were to prepare for a career (67%), for a good job (64.6%) or for a wide range of jobs (54.8%). An additional 30.1% would take elective courses to prepare for a two year college and 64.5% for higher education.

APPENDIX D

STRONG INTEREST INVENTORY OF THE
STRONG VOCATIONAL INTEREST BLANKS

PAGE 1

PROFILE REPORT FOR:

ID: 03
AGE: 16 SEX: F

DATE TESTED: 06/12/92
DATE SCORED: 7/ 6/92

SPECIAL SCALES: ACADEMIC COMFORT 7
INTROVERSION-EXTROVERSION 74

TOTAL RESPONSES: 325 INFREQUENT RESPONSES: 1

GOT	
R	Very Low
I	Very Low
A	Very Low
S	Very Low
E	Very Low
C	Very Low

REALISTIC

GENERAL OCCUPATIONAL THEME - R
Very Low 30

BASIC INTEREST SCALES (STANDARD SCORE)

AGRICULTURE
Average 46

NATURE
Low 37

ADVENTURE
Average 42

MILITARY ACTIVITIES
Mod. Low 44

MECHANICAL ACTIVITIES
Low 35

INVESTIGATIVE

GENERAL OCCUPATIONAL THEME - I
Very Low 30

BASIC INTEREST SCALES (STANDARD SCORE)

SCIENCE
Low 36

MATHEMATICS
Low 34

MEDICAL SCIENCE
Very Low 30

MEDICAL SERVICE
Low 36

ARTISTIC

GENERAL OCCUPATIONAL THEME - A
Very Low 34

BASIC INTEREST SCALES (STANDARD SCORE)

MUSIC/DRAMATICS
Low 40

ART
Very Low 35

[illegible]
Very Low 29

OCCUPATIONAL SCALES

		Occupation	STANDARD SCORES F	STANDARD SCORES M	VERY DISSIMILAR	DISSIMILAR	MODERATELY DISSIMILAR	MID-RANGE	MODERATELY SIMILAR	SIMILAR	VERY SIMILAR
						15 25 30		40	45	55	
(CRS)	RC	Marine Corps enlisted personnel	(CRS)	21							
RC	RC	Navy enlisted personnel	32	42				*			
RC	RC	Army officer	18	13		*					
RI	RSC	Navy officer	19	8		*					
R	R	Air Force officer	22	10		*					
(C)	R	Air Force enlisted personnel	(C)	40							
R	R	Police officer	28	28			*				
R	R	Bus driver	51	54						*	
R	R	Horticultural worker	41	42					*		
RC	R	Farmer	40	47					*		
R	RCS	Vocational agriculture teacher	39	23				*			
RI	R	Forester	26	25			*				
(IR)	RI	Veterinarian	(IR)	27							
RAS	(SR)	Athletic trainer	7	(SR)	*						
RS	R	Emergency medical technician	38	31				*			
RI	RI	Radiologic technologist	42	23					*		
RI	R	Carpenter	22	37		*					
RI	R	Electrician	15	34		*					
RIA	(AR)	Architect	23	(AR)		*					
RI	RI	Engineer	16	17		*					
IRC	IRC	Computer programmer	29	29			*				
IRC	IRC	Systems analyst	25	13			*				
IRC	IR	Medical technologist	22	14		*					
IR	IR	R & D manager	17	14		*					
IR	IR	Geologist	28	44			*				
IR	(I)	Biologist	17	(I)		*					
IR	IR	Chemist	19	18		*					
IR	IR	Physicist	12	22	*						
IR	(RI)	Veterinarian	28	(RI)			*				
IRS	IR	Science teacher	11	24	*						
IRS	IRS	Physical therapist	29	17			*				
IR	IRS	Respiratory therapist	34	16				*			
IC	IR	Medical technician	41	21					*		
IC	IR	Pharmacist	33	19				*			
ISR	(CSE)	Dietitian	18	(CSE)		*					
(SI)	ISR	Nurse, RN	(SI)	17							
IR	I	Chiropractor	23	27		*					
IR	IR	Optometrist	22	26		*					
IR	IR	Dentist	23	21		*					
I	IA	Physician	24	33		*					
(IR)	I	Biologist	(IR)	35							
I	I	Mathematician	24	32		*					
IR	I	Geographer	35	36				*			
I	I	College professor	38	37				*			
IA	IA	Psychologist	20	35		*					
IA	IA	Sociologist	19	21		*					
AI	AI	Medical illustrator	23	12		*					
A	A	Art teacher	1	30	*						
A	A	Artist, fine	46	46						*	
A	A	Artist, commercial	20	41		*					
AE	A	Interior decorator	23	43		*					
(RIA)	ARI	Architect	(RIA)	32							
A	A	Photographer	38	38				*			
A	A	Musician	40	45					*		
AR	(EA)	Chef	33	(EA)				*			
(E)	AE	Beautician	(E)	39							
AE	A	Flight attendant	30	30				*			
A	A	Advertising executive	38	37				*			
A	A	Broadcaster	34	47				*			
A	A	Public relations director	15	24		*					
A	A	Lawyer	29	23			*				
A	AS	Public administrator	21	9		*					
A	A	Reporter	18	35		*					
A	A	Librarian	13	37	*						
AS	AS	English teacher	4	15	*						
(SA)	AS	Foreign language teacher	(SA)	25							

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PALO ALTO, CA 94303

8 48 O P 8

Understanding Your Results on the Strong

Your answers to the test booklet were used to determine your scores; your results are based on what you said you liked or disliked. The results can give you some useful systematic information about yourself, but you should not expect miracles.

Please note that this test does not measure your abilities; it can tell you something about the patterns in your interests, and how these compare with those of successful people in many occupations, but the results are based on your *interests*, not your abilities. The results may tell you, for example, that you like the way engineers spend their day; they do *not* tell you whether you have an aptitude for the mathematics involved.

Although most of us know something of our own interests, we're not sure how we compare with people actively engaged in various occupations. We don't know "what it would be like" to be a writer, or receptionist, or scientist, for example. People using these results are frequently guided to considering occupations to which they had never given a thought before. In particular, this inventory may suggest occupations that you might find interesting but have not considered simply because you have not been exposed to them. Or the inventory may suggest occupations that you ignored because you thought they were open only to members of the opposite sex. Sexual barriers are now falling, and virtually all occupations are open to qualified people of either sex — so don't let imagined barriers rule out your consideration of any occupation.

Men and women, even those in the same occupation, tend to answer some items on the test differently. Research has shown that these differences should not be ignored — that separate scales for men and women provide more meaningful results. Generally, the scales for your sex — those marked in the "Standard Scores" column corresponding to your sex — are more likely to be better predictors for you than scales for the other sex would be.

Your answers have been analyzed in three main ways: first, under "General Occupational Themes," for similarity to six important overall patterns; second, under "Basic Interest Scales," for similarity to clusters of specific activities; third, under "Occupational Scales," for similarity to the interests of men and women in 106 occupations. The other two groups of data on the profile — labeled "Administrative Indexes" and "Special Scales" — are of interest mainly to your counselor. The first are checks to make certain that you made your marks on the sheet clearly and that your answers were processed correctly. The second are scales that have been developed for use in particular settings and require special interpretation; your counselor will discuss them with you.

The Six General Occupational Themes

Psychological research has shown that vocational interests can be described in a general way by six overall occupational-interest Themes. Your scores for these six Themes were calculated from the answers you gave to the test questions. The range of these scores is roughly from 30 to 70, with the average person scoring 50.

Men and women score somewhat differently on some of these Themes, and this is taken into account by the printed statement for each score; this statement, which might be, for example, "Very High," is based on a comparison between your score and the average score for your sex. Thus, you can compare your score either with the scores of a combined male-female sample, by noting your numerical score, or with the scores of only member of your own sex, by noting the phrasing of the printed comment.

The differences between the sexes on these Themes also are shown on the profile; the open bars indicate the middle 50 percent of female scores, the shaded bars show the middle 50 percent of male scores. The extending, thinner lines cover the middle 80 percent of the scores, and the mark in the middle is the average.

Following are descriptons of the "pure," or extreme, types for the six General Occupational Themes. These descriptions are only generalizations; none will fit any one person exactly. In fact, most people's interests combine several Themes to some degree or other.

R-Theme: People scoring high here usually are rugged, robust, practical, physically strong; they usually have good physical skills, but sometimes have trouble expressing themselves or in communicating their feelings to others. They like to work outdoors and to work with tools, especially large, powerful machines. They prefer to deal with things rather than with ideas or people. They enjoy creating things with their hands and prefer occupations such as mechanic, construction work, fish and wildlife management, radiologic technologist, some engineering specialties, some military jobs, agriculture, or the skilled trades. Although no single word can capture the broad meaning of the entire Theme, the word REALISTIC has been used here, thus the term R-Theme.

I-Theme: This Theme centers around science and scientific activities. Extremes of this type are task-oriented; they are not particularly interested in working around other people. They enjoy solving abstract problems, and they have a great need to understand the physical world. They prefer to think through problems rather than act them out. Such people enjoy ambiguous challenges and do not like highly structured situations with many rules. They frequently are original and creative, especially in scientific areas. They prefer occupations such as design engineer, biologist, social scientist, research laboratory worker, physicist, technical writer, or meteorologist. The word INVESTIGATIVE characterizes this Theme, thus I-Theme.

A-Theme: The extreme type here is artistically oriented, and likes to work in artistic settings that offer many opportunities for self-expression. Such people have little interest in problems that are highly structured or require gross physical strength, preferring those that can be solved through self-expression in artistic media. They resemble I-Theme types in preferring to work alone, but have a greater need for individualistic expression, and usually are less assertive about their own opinions and capabilities. They describe themselves as independent, original, unconventional, expressive, and intense. Vocational choices include artist, author, cartoonist, composer, singer, dramatic coach, poet, actor or actress, and symphony conductor. This is the ARTISTIC Theme, or A-Theme.

S-Theme: The pure type here is sociable, responsible, humanistic, and concerned with the welfare of others. These people usually express themselves well and get along well with others; they like attention and seek situations that allow them to be near the center of the group. They prefer to solve problems by discussions with others, or by arranging or rearranging relationships between others; they have little interest in situations requiring physical exertion or working with machinery. Such people describe themselves as cheerful, popular and achieving, and as good leaders. They prefer occupations such as school superintendent, social worker, high school teacher, marriage counselor, playground director, speech therapist, or vocational counselor. This is the SOCIAL Theme, or S-Theme.

E-Theme: The extreme type of this Theme has a great facility with words, especially in selling, dominating, and leading; frequently these people are in sales work. They see themselves as energetic, enthusiastic, adventurous, self-confident, and dominant, and they prefer social tasks where they can assume leadership. They enjoy persuading others to their viewpoints. They are impatient with precise work or work involving long periods of intellectual effort. They like power, status, and material wealth, and enjoy working in expensive settings. Vocational preferences include business executive, buyer, hotel manager, industrial relations consultant, political campaigner, realtor, sales work, and sports promoter. The word ENTERPRISING summarizes this pattern, thus E-Theme.

(Continued on page 2 back)

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STRONG INTEREST INVENTORY OF THE
*STRONG VOCATIONAL INTEREST BLANKS

PROFILE REPORT FOR:

ID: 03
AGE: 16 SEX: F

DATE TESTED: 06/12/92
DATE SCORED: 7/ 6/92

SOCIAL

GENERAL OCCUPATIONAL THEME - S
Very Low 26

BASIC INTEREST SCALES (STANDARD SCORE)

TEACHING — Mod. Low 38
SOCIAL SERVICE — Very Low 35
ATHLETICS — Mod. Low 38
DOMESTIC ARTS — Mod. Low 44
RELIGIOUS ACTIVITIES — Low 37

ENTERPRISING

GENERAL OCCUPATIONAL THEME - E
Very Low 28

BASIC INTEREST SCALES (STANDARD SCORE)

PUBLIC SPEAKING — Very Low 31
LAW/POLITICS — Very Low 33
MERCHANDISING — Very Low 30
SALES — Very Low 37
BUSINESS MANAGEMENT — Very Low 29

CONVENTIONAL

GENERAL OCCUPATIONAL THEME - C
Very Low 26

BASIC INTEREST SCALES (STANDARD SCORE)

OFFICE PRACTICES — Low 39

OCCUPATIONAL SCALES

F	M		STANDARD SCORES F	STANDARD SCORES M
SA	(AS)	Foreign language teacher	10	(AS)
SA	SA	Minister	1	12
SA	SA	Social worker	17	16
S	S	Guidance counselor	14	21
S	S	Social science teacher	10	23
S	S	Elementary teacher	31	22
S	S	Special education teacher	14	6
SRI	SAR	Occupational therapist	26	19
SIA	SAI	Speech pathologist	20	18
SI	(ISR)	Nurse, RN	18	(ISR)
SCI	N/A	Dental hygienist	32	N/A
SC	SC	Nurse, LPN	37	27
(RIS)	SR	Athletic trainer	(RIS)	30
SR	SR	Physical education teacher	28	9
SRE	SE	Recreation leader	15	18
SE	SE	YWCA/YMCA director	13	11
SEC	SCE	School administrator	11	11
SCE	N/A	Home economics teacher	19	N/A
E	ES	Personnel director	17	7
ES	E	Elected public official	8	24
ES	ES	Life insurance agent	11	0
EC	E	Chamber of Commerce executive	31	11
EC	EC	Store manager	27	23
N/A	ECR	Agribusiness manager	N/A	35
EC	EC	Purchasing agent	14	19
EC	E	Restaurant manager	12	42
(AR)	EA	Chef	(AR)	33
EC	E	Travel agent	23	49
ECS	E	Funeral director	20	38
(CSE)	ESC	Nursing home administrator	(CSE)	19
EC	ER	Optician	39	42
E	E	Realtor	10	16
E	(AE)	Beautician	59	(AE)
E	E	Florist	37	32
EC	E	Buyer	30	33
EI	EI	Marketing executive	31	42
EIC	EIC	Investments manager	35	32
C	C	Accountant	33	20
C	C	Banker	42	23
CE	CE	IRS agent	7	15
CES	CES	Credit manager	24	17
CES	CES	Business education teacher	16	12
(CS)	CES	Food service manager	(CS)	19
(ISR)	CSE	Dietitian	(ISR)	28
CSE	(ESC)	Nursing home administrator	23	(ESC)
CSE	CSE	Executive housekeeper	26	23
CS	(CES)	Food service manager	40	(CES)
CS	N/A	Dental assistant	33	N/A
C	N/A	Secretary	36	N/A
C	(R)	Air Force enlisted personnel	43	(R)
CRS	(RC)	Marine Corps enlisted personnel	26	(RC)
CRS	CR	Army enlisted personnel	21	32
CSR	CSR	Mathematics teacher	18	29

VERY DISSIMILAR · DISSIMILAR · MODERATELY DISSIMILAR · MID RANGE · MODERATELY SIMILAR · SIMILAR · VERY SIMILAR

15 25 30 40 45 55

ADMINISTRATIVE INDEXES (RESPONSE %)

OCCUPATIONS	7	L	4	I	89	D		%
SCHOOL SUBJECTS	6	L	6	I	89	D		%
ACTIVITIES	8	L	4	I	88	D		%
LEISURE ACTIVITIES	23	L	28	I	49	D		%
TYPES OF PEOPLE	25	L	25	I	50	D		%
PREFERENCES	13	L	60	=	27	R		%
CHARACTERISTICS	14	Y	71	?	14	N		%
ALL PARTS	11		17		72			%

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Strong Interest Inventory of the Strong Vocational Interest Blanks® Form T325
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CONSULTING PSYCHOLOGISTS PRESS, INC.
3803 EAST BAYSHORE ROAD
PALO ALTO, CA 94303

(Continued from back of page 1)

C-Theme: Extremes of this type prefer the highly ordered activities, both verbal and numerical, that characterize office work. People scoring high fit well into large organizations but do not seek leadership; they respond to power and are comfortable working in a well-established chain of command. They dislike ambiguous situations, preferring to know precisely what is expected of them. Such people describe themselves as conventional, stable, well-controlled, and dependable. They have little interest in problems requiring physical skills or intense relationships with others, and are most effective at well-defined tasks. Like the E-Theme type, they value material possessions and status. Vocational preferences are mostly within the business world, and include bank examiner, bank teller, bookkeeper, some accounting jobs, mathematics teacher, computer operator, inventory controller, tax expert, credit manager, and traffic manager. The word CONVENTIONAL more or less summarizes the pattern, hence C-Theme.

These six Themes can be arranged in a hexagon with the types most similar to each other falling *next* to each other, and those most dissimilar falling directly *across* the hexagon from each other.

Few people are "pure" types, scoring high on one and only one Theme. Most score high on two, three, or even four, which means they share some characteristics with each of these; for their career planning, such people should look for an occupational setting that combines these patterns.

A few people score low on all six Themes; this probably means they have no consistent occupational orientation and would probably be equally comfortable in any of several working environments. Some young people score this way because they haven't had the opportunity to become familiar with a variety of occupational activities.

The Basic Interest Scales

These scales are intermediate between the General Occupational Themes and the Occupational Scales. Each is concerned with one specific area of activity. The 23 scales are arranged in groups corresponding to the strength of their relationship to the six General Themes.

On these scales, the average adult scores about 50, with most people scoring between 30 and 70. If your score is substantially higher than 50, then you have shown more consistent preferences for these activities than the average adult does, and you should look upon that area of activity as an important focus of your interests. The opposite is true for low scores. Your scores are given both numerically and graphically, and an interpretive comment, based on a comparison between your scores and the average score for your sex, also is provided.

Your scores on some of the Basic Interest Scales might appear to be inconsistent with scores on the corresponsing Occupational Scales. You might, for example, score high on the Mathematics scale and low on the Mathematician scale. Those scores are not errors; they are in fact a useful finding. What they usually mean is that although you have an interest in the subject matter of an occupation (mathematics), you share with people in that occupation (mathematicians) very few of their other likes or dislikes, and you probably would not enjoy the day-to-day life of their working world.

The Occupational Scales

Your score on an Occupational Scale shows how similar your interests are to the interests of people in that occupation. If you reported the same likes and dislikes as they do, your score will be high and you would probably enjoy working in that occupation or a closely related one. If your likes and dislikes are different from those of the people in the occupation, your score will be low and you might not be happy in that kind of work. Remember that the scales of your sex — marked in the "Standard Scores" column with the sex corresponding to yours — are more likely to be good predictors for you than scales for the other sex.

Your score for each scale is printed in numerals — for those scales normed for your sex — and also plotted graphically. Members of an occupation score about 50 on their own scale — that is, female dentists score about 50 on the Dentist F scale, male fine artists score about 50 on the Fine Artist M scale, and so forth. If you score high on a particular scale — say 45 or 50 — you have many interests in common with the workers in that occupation. The higher your score, the more common interests you have. *But note that on these scales your scores are being compared with those of people working in those occupations;* in the scoring of the General Themes and the Basic Interest Scales you were being compared with "people-in-general."

The Occupational Scales differ from the other scales also in considering your dislikes as well as your likes. If you share in the same *dislikes* with the workers in an occupation, you may score moderately high on their scale, even if you don't agree with their *likes*. But a higher score — 50 — reflects an agreement on likes *and* dislikes.

To the left of each Occupational Scale name are one to three letters indicating the General Themes characteristic of that occupation. These will help you to understand the interest patterns found among the workers in that occupation, and to focus on occupations that might be interesting to you. If you score high on two Themes, for example, you should scan the list of Occupational Scales and find any that have the same two Theme letters, in any order. If your scores there are also high — as they are likely to be — you should find out more about those occupations, and about related occupations not given on the profile. Your counselor can help you.

Academic Comfort and Introversion-Extroversion

There are two Special Scales derived from your Strong responses that may give you additional insight into your interest and expectations.

The Academic Comfort Scale differentiates between people who enjoy being in an academic setting and those who do not. Remember, however, that the Academic Comfort Scale *does not measure ability*. About 2/3rds of all people who take the Strong score in the range of 32 to 60. People with low scores (below 40) often are inclined to view education as a necessary hurdle for entry into a career. People with high scores (above 50) typically seek out courses that allow them to explore theory and research in their chosen field.

The Introversion-Extroversion Scale is associated with a preference for working with things or ideas (high scores, say, above 55) or with people (low scores, say, below 45). Scores between 45 and 55 indicate a combination of interests that include a working with people and ideas or things in the same occupation.

Using Your Scores

Your scores can be used in two main ways: first, to help you understand how your likes and dislikes fit into the world of work; and second, to help you identify possible problems by pointing out areas where your interests differ substantially from those of people working in occupations that you might be considering. Suppose, for example, that you have selected some field of science, but the results show that you have only a moderate interest in the daily practice of the mathematical skills necessary to that setting. Although this is discouraging to learn, you at least are prepared for the choice among (1) abandoning that field of science as a career objective, (2) trying to increase your enthusiasm for mathematics, or (3) finding some branch of the field that requires less mathematics.

In the world of work there are many hundreds of specialties and professions. Using these results and your scores on other tests as guides, you should search out as much information as you can *about those occupational areas where your interests and aptitudes are focused.* Ask your librarian for information on these jobs and talk to people working in these fields. Talk with your counselor, who is trained to help you, about your results on this test and other tests, and about your future plans. Keep in mind that choosing an occupation is not a single decision, but a series of decisions that will go on for many years. Your scores on this inventory should help.

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